The Australian
COMMODORE
and AMIGA REVIEW

Amiga Music Making

**Lords of the Rising Sun
Pioneer Plague, Silkworm, Gunship
Balance of Power 1990**

- Virus Alert!
- Geos 128 v.2
- Writing Wedges
- Adventurer's Realm

*Recommended retail price

The Australian COMMODORE and Amiga Review

VOL. 6 NO. 6 — August 1989

Contributors

Mario Annetta
Andrew Baines
Jon Benjamin
Phil Campbell
Oben Candemir
Nathan Cochrane
Damien Disney
Peter Gallen
Anthony Gillan
Michael Hassett
Eric Holroyd
Stuart Kennedy
David Legard
Rod McCallum
Dennis Nicholson
Marco Ostini
Frank Patterson
Ian Preston
Adam Rigby
Adrian Sheedy
Richard Silsby
Lindsay Swadling
Tony Smith
Trevor Smith
Michael Spiteri
Tim Strachan
David Thompson
Nick Van Heeswyk
Harry Waterworth
David Williams
Graham Winterflood

CONTENTS

Editorial

There is only one thing we are sure about in this issue. Commodore 64 owners will not like it. We don't like it. Well, let me put it another way. It's kind of sad to see that the flow of product for the C64 has slowed to a virtual drought. What that means is we don't have any amazing news of fab new wordprocessors or add-ons anymore. There is still a trickle of games and other odds and ends.

The tough part is, we don't want to lose you. So, we plan on having more programs to type in, more technical/programming/do it yourself type stories. More of what we used to have back when the Commodore review first got started. We would like to read more user stories, hints and tips and contributions from C64 owners. As the products dry up, the need for good information will be all the more.

So, let's all pull our combined C64 brains together and help all those dedicated C64ers hang in there. Not everyone wants an Amiga. Not everyone can afford an Amiga. After all $1500 on a home computer is a fair wad of money these days, with interest rates and all.

We do want to make it clear that we will run as much editorial on the C64 as we can. But we can only run as much as we get from you. If you're a dedicated C64er with no plans to Amigerise in the next six months, and you can write reasonably well, why not write in. Send us a disk! Now's your chance to expound on all those areas of C64 programming or game play only you know so well.

For Amiga users, it was a matter not of what to publish but what to leave out. There is so much happening it is unbelievable. New products are arriving thick and fast. Not only are they new, but the quality is on the up. Watch out for *Pen Pal* - we reckon it will be the must have wordprocessor for all Amiga owners. With that in mind - steer clear of any WYSIWIG wp's until you see *Pen Pal*. ❏

Andrew Farrell

We don't only give you a Business Computer.
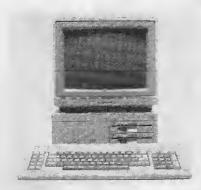
We give you a choice.

Commodore's extensive range of PCs gives you a wide choice of PC options.

A choice of configurations and concepts from Amiga graphics to powerful AT standard performance.
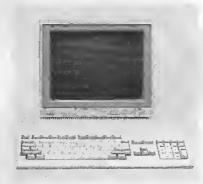
See the full range of Commodore business computers at your Commodore dealer now.

See Your Nearest Commodore Dealer.

Commodore Amiga 500
With features such as multitasking and upgrading options, it's Australia's best selling small business computer.*

Commodore Amiga 2000
A true investment, because of its capability to expand, it offers multitasking to ensure versatility and increased productivity.
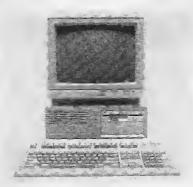
Commodore PC Colt
The quality PC-XT equivalent, ready to start work with colour or mono capability.
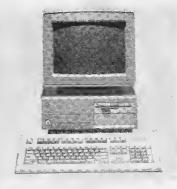
Commodore PC 10 III
The small footprint of this PC will save your desk space, it's also expandable – definitely a high performance XT.

Commodore PC 40 III
-The high specification AT compatible, for the power user, delivers exceptional performance in a small footprint.

(commodore
S M A R T E R .

JSA COM 0313

C64ers . . .

JiffyDOS

JiffyDOS is a new "Rapid" disk drive speed-enhancement system which has many good features. It leaves cartridge and user ports open, works with modems and communications software, supports more than two disk drives, is guaranteed compatible with all software and hardware, etc.

JiffyDOS is available for C-64, 64C, SX-64, C-128 & C-128D, and 1541, 1541C, 1541-II, 1571, 1581, FSD-1&2, MSD1&2, Excel 2001, Enhancer 2000 disk drives. System includes ROMs for computer and disk drive, stock/JiffyDOS switching system, illustrated step-by-step installation instructions, user's manual, money back guaranted, and unlimited customer support.

For further information phone Hardware Peripheral Distributors,(08)252 3300.

Turbomenu

Also from Hardware Peripheral Dis-tributors is the new Turbomenu, a car-tridge for use with disk drives featuring: up to five times normal loading speed with both the 1541 and 1571 disk drives.

It also has simplified DOS commands for loading files, formatting disks, delet-ing files etc, stoppable directory listing which does not overwrite programs in memory, built in menu maker to provide a menu for each disk to simplify loading and running of programs, easy listing of BASIC programs to printer, text screen dump to printer, reset button.

RRP $44.95, for use with C64 or C128 in 64 mode. (08)252 3300.

Stormlord

In this game from Pactronics Storm-lord's domain is degenerating from a quiet, peaceful land into a war-torn, vio-lent place, and the evil queen has impris-oned all the fairies. You the Stormlord must get rid of the evil queen and her minions and restore peace to the realm. Hundreds of puzzles and a vast number of levels means hours of game play. C64 disk. Pactronics (02) 407 0261.

Fun School Series

Parents, check out this brilliant set of educational funtools from Pactronics. Available for three different age groups, each comes complete with eight educa-tional games ideally suited for the specific age group. Maths, Spelling, Colour Co-ordination, Logic, Geography. Fun and good encouragement to learn.

C64 disk and tape, and Amiga. Pac-tronics (02) 407 0261.

New games

New games being released for the C64 include *Flying Shark*, *Startrek - the Rebel Universe*, *3D Pool*, *Titan*, and *Pirates*. See Entertainment Roundup on page 16 of this issue.

Look out for a review of *Boot Camp 19* in our next issue.

RAM Rumbles

Fun computer stationery

● Unlike plain and coloured paper, Whimsical Computer Stationery has a personality of its own and is ideal for enhancing documents from your word processor. It fits any standard tractor-fed printer.

The stationery is the product of Computer Sensations, a company based in California. Whimsical Computer Stationery can be used in a number of places for a variety of reasons. Various quaint designs suitable for various uses are printed along the sides and top of each page.

At home you can use the stationery to brighten up your personal correspondence. And at the office, give new impact to budget reports by printing your final draft on "Dinosaurs Wearing Sneakers" for the boss. Brighten up internal memos and notices or print out invitations to the next staff party using any one of the designs.

Six designs are now available from Ashton Scholastic Software including Bears Going Camping, Seagulls Soaring, Lambs Playing, Bears with Bow Ties, Dinosaurs Wearing Sneakers, Boats Sailing. Recommended school price $7.50 per design, RRP $8.95 per design.

For information contact Matthew Cross, Software Support (043) 28 3555.

Revolutionary re-inking machine

● Softcover Software Pty. Ltd. has introduced a revolutionary re-inking machine to its list of budget products. Wet Ribbon is a money saving re-inking machine for dot matrix printer ribbons of all sizes and makes.

Electrically operated, the re-inker offers a new lease of life for old printer ribbons, saving hundreds of dollars in ribbon costs. The distributor claims fabric printer ribbons can often be re-inked up to 50 times before they show any sign of wear. The re-inker will not revitalise carbon ribbons since they are manufactured from a nonporous plastic material. These can be recognised from the glossy appearance on one side and matt on the other side.

The compact machine, standing 250mm high and weighing 1 kg, uses specially formulated dot matrix ink which is available in 100ml bottles, enough to re-ink 30 ribbons.

Priced at $A299.00, the re-inking machine will service most widths and sizes of ribbons. It is easy to use and tests show that the print head life span is extended since regular re-inkings remove the need to increase the print head strike.

The ink is abrasive free and has the correct added lubricant that operates over the complete temperature range of print head use. Ribbons that are regularly re-inked with lubricated, carbonless ink will also remain supple and will not fray and the ink helps cool the print head needles.

Softcover Software offer a money back guarantee should users not be entirely satisfied with the re-inker.

Movements at Commodore

● A fine army of personnel is gathering at the offices of Commodore under the guidance of new Managing Director, Pat Byrne. A recent addition to the team includes Edwin Huang, who has been appointed General Manager of Marketing Asia/Pacific. ❏

Notepad

A590 News

● It seems that the A590 hard disk/ram expander add-on for the A500 is a reality and being tested in the US and here - word has it that it will be released here in August. If they can bring it in at about $1000, Commodore will have a big seller, as there are many A500 owners casting around for more Ram and more storage. The word is that it'll consist of a 20-meg hard drive and space for 2 meg of Ram (which you add yourself when the pocket's up to it).

The A2500UX (yes, but when?)

● Big brother to the A2000HD (basically a 2000 with one floppy drive and a 40 meg hard drive and autobooting system software - well, okay), it is a workstation running the full Unix System V, not just a reduced subset. Standard hardware will include an 80 meg hard drive (to hold all that Unix stuff) and a 150 meg streaming tape backup system. The brain is a 68020 chip running at 14.3 megahertz, with a 68851 MMU (memory management unit), a 68881 maths co-processor (to really speed things up by taking advantage of the Maths libraries of system 1.3), and 5 Megs of Ram broken up into 1 Meg of Chip Ram (using the coming "Enhanced Chip Set") and 4 Meg of 32-bit wide Ram (to maximise the power of the 68020/68881 combination). It seems that this blitzer of a machine will be ugradable to run at a speed of 25 Megahertz...! I want one! No indication about release dates in Australia .

The A2620 and the midget board (non-Commodore)

● The A2620 is a 68020 with 68881 and 2 Meg of 32-bit ram, upgradable to 4 Megs. Sounds like a useful addition to your A2000. The "Midget Board" is also a double-chip (020 and 8881) combination without any 32 bit ram, but fitting into any Amiga and only about 10cm square, retailing in the US for $540 currently, and I believe some suppliers are getting it here soon.

Amiga software outsells Atari by slim margin

● The slim margin, according to an importer here, is a ratio of about 40:1...No wonder Atari is lurching from one product launch to another in a desperate attempt to make something sell well. And for the first time ever, sales of Amiga entertainment software did better than any other group of machines.

Educational authoring systems - without programming knowledge

● AU-901 CLAS - create interactive teaching lessons, lets you write imaginative programs with digitised pictures, voice, music, all custom-designed. Contains English, German, Spanish and French alphabets (but no Abyssinian). US$99 from MicroEd, P O Box 24750, Edina, MN 55424. Tel: (612) 9292242.

● PILOT ("Programmed Inquiry, Learning, Or Teaching Version 1.3") - for computer based instruction and interactive video using the PILOT command set. Lots of options, and supports the Pioneer LD-V4200 Laser VideoDisc Player, & other serial video devices, genlock and touch-panel support for the Sony PVM-1911 monitor. US4299.95 from: Flight Training Devices, P O Box 91723, Anchorage, AK 99509, Tel: (907) 2766719.

● MICRODEAL do a series of authoring languages from the professional to entry-level, and under the name of VIVA. More info from: Mich-tron, 576 S. Telegraph, Pontiac, MI 48053. Tel: (313) 3345700.

IBM & Mac graphics to Amiga format

● You need the A2088 Bridgeboard to convert text and graphics screens from CGA, EGA, Hercules or AT&TT 6300 Graphics cards, using the IMSI Interpreter, from Product Support and Development, 1299 Fourth St, San Rafael, CA 94901. Tel: (415) 4549678. Check out details of the MAC Emulator on Megadisc 10, and also MAC-VIEW, a utility for converting Mac graphics to Amiga format (on an early Fish Disk. MAC-2-DOS from East Coast Software (see below) transfers Macintosh files to and from the Amiga, using single- or double-sided disks. Both text and Paint files can be converted, and it requires use of a Mac external 3.5" drive and an adaptor cable to allow the Mac drive to be used with the Amiga. Price of program with drive and cable US$295; with cable only, US$89.95.

"Palette" - Australian disk mag for graphics

● Anyone interested in graphics on the Amiga should have a subscription to this lo-cally produced magazine on disk - 3 disks per issue (more or less monthly) , and a lot of information and techniques. Put out by Denis Nicholson at 66 Parer St, Burwood, Vic. 3125.

Microfiche Filer and PD templates for Analyze!, VIP prof

● Called "Designer Databases", there is *Home 1* for US$39 and *Business 1* for US$59, and work with M. Filer. You get catalogues for Videotape, audio, stamps, etc on *Home 1*, and all the usual business applications for the other. Information: Software Visions, PO Box 3319, Framingham, MA 01701. Tel: (508) 8751238.

Along these lines, you can get FREE templates for *Analyze!* and *VIP Professional* on Megadisc's PD disk "APPLICATIONS #1", and they are said to be very good.

Geo Graphic Database - interactive map of Australia

● Found in an American mag, it appears a gent called George Bailey has come up with a shareware (US$15) interactive map of Australia, by use of the Director Script Animation program. Is this guy Australian? Wouldn't such a thing be useful in Oz schools? More info anyway from: 6474 Highway 11, DeLeon Springs, FL 32028.

Forth for the Amiga

● There was an enquiry as to whether this language exists for the Amiga - in a word, yes. *Multi-Forth* from Creative Solutions, Inc., 4701 Randolph Rde. Ste. 12, Rockville, MD 20852. TEL: (301) 9840262. Cost is US$99, and it's said to be a good implementation. There is also a commercial product called *JForth*, with interpreter and compiler in the

one language, for US$99. From Delta Research, P O Box 1051, San Rafael, CA 94915, Tel: (415) 4856867. Any reviews, anyone?

AREXX - what is it anyway?

● ("Restructured EXtended eXecutor language", that's what it is!) As far as we know,

it's a very high level language...It can be coaxed into doing all sorts of things when you know how. An example recently noted: you could get it to automatically open up your database program, load a file, insert some information, save and resort the file, close it down, turn off the database and tell you what it's done. With a simple macro command you've set up. That's fine, but where are these macros when you need them, has anyone written a suite of them with a "runtime" Arexx package, why doesn't someone make the whole thing more comprehensible? The fact is that many programs are now being released or upgraded with Arexx compatibility, and it's obvious that there is serious "interprocess communications" power available poten-

tially - but the programmers need to make it more accessible to the end user. According to a recent article in *Transactor*, Magellan (the Artificial Intelligence people) are building Arexx support into their offerings, leading to speculations about your computer intelligently responding to your pleas (from another computer in another place) to try this and that by opening and extracting this and that, and giving you the end result...Well, the possibilities are there, so let's see some integrated environments set up using the software we already have. Anyway, we're getting this package, and we'll see if we can make it work.

Ethernet networking and X-windows

● We got in touch with

Dale Luck, one of the original designers of the Amiga (A1000 owners will see his signature imprinted "under the hood" of their computers), who now runs GFXBASE specialising in the above products. I couldn't think of a more suitable person to do it. His company has developed Amiga versions of these industry standards, and I'll paraphrase the information he sent:

The Ameristar Internet package, which includes all the necessary hardware (the AE-2000 controller card for the A2000) and software and documentation for US$899, allows the Amiga to communicate via the standard Internet protocols to inter-operate with most networks consisting of either TCP or Unix hosts. The Amiga is an ideal choice as a low cost, high performance

graphic front-end, rather than the costly Unix workstations currently filling the role. It appears that this is a full professional implementation of networking, and opens up a lot of possibilities.

The X Window System allows Amigas on a network to access all X11 (X Windows Version 11) programs available. X11 is actually an industry standard graphics library, independent of network or hardware or operating system. Since it's available on workstations such as Suns, Vaxes, HPs, Crays and IBMs, a whole world of software is opened up for the Amiga - you can be running programs from a remote super-computer, and it will appear that it's running on your Amiga. Not only that, but you can have a number of such connections and pro-

News from the USA
by Peter Ward

The Amiga 3000 is here!

● It is a 68030 based machine and has the capability to perform a ray-trace that would have previously taken over one hour, in a mere four minutes. It has one megabyte of Chip RAM and can support 256 colours on screen from a palette of 16 million. Four megabytes of 32 bit RAM is also provided.

Now before you flood *Commodore and Amiga Review* with enquiries, I should mention the above is not the "official" Commodore 3000 release. It is however, what I saw available from the USA in June, being a combination of products marketed by GVP Inc and Commodore as a possible Amiga 3000 upgrade path.

The first and most readily obtainable upgrade item was

the new Agnus CHIP by Commodore. I spoke to Darrin Doss of Creative Computers in L.A. who had been swamped with orders to replace Agnus chips. Apart from chip replacement, the upgrade involved (on the A500 and A2000) modification of the motherboard by cutting one of the PCB traces and the resoldering of a pad. This procedure will allow the new Agnus in existing A500s to take over the A501 expansion memory and address one megabyte of Chip ram, with a similar process taking place in the A2000, along with the ability to display overscanned PAL Hi-Res, non interlaced images on a multisync monitor.

A 3000 upgrade kit

● Great Valley Products Inc have introduced an A3000

upgrade kit" for existing A2000 owners. Called the Impact A2000-030 board, it uses a Motorola 68030 CPU running at either 16 Mhz or 25 Mhz clock speeds. An optional 25 Mhz 68882 math co-processor may also be installed and to make full use of the 68030 architecture, a daughter board populated with either four or eight megabytes of 32 bit ram is available.

GVP have gone one further by including mounting sockets for the soon to be released UNIX ROMs by Commodore. What makes the Impact board so blindingly fast is its ability for synchronous operation, so that the board can address the Amiga custom chips at 7.14 Mhz, whilst simultaneously running the 68030 and 32 bit memory at 25 MHz (with some modification 28Mhz can also be achieved!)

Installation of the board is

a simple matter of placing the Impact card in the A2000 co-processor slot, with the 68030 automatically disabling the 68000. In addition a jumper switch or software can be used to revert back to pure 68000 operation for those games that just refuse to run on a 68030. The Amiga 2000 fully optioned with an Impact 68030/25 CPU and 68882 co-processor and 4 Megs of 32 bit ram (the A3000 "Kit") is priced at $US3395.

What is interesting to note is that the performance of an Amiga configured into this system is some 50 percent faster than either a Sun 3/80 ($US12,595) or Compaq 386/20 ($US21,000) workstation and is measurably faster than an Apollo DN3500 costing four times the price!

While pricing of the fully optioned A3000 kit is beyond most home users, most profes-

sionals would not flinch considering the cost of rival systems, however GVP have a low cost entry option, the A2000-030/16 board priced at $US849.

Video board

● As I have previously mentioned in this column, Commodore are soon to release a video board supporting 1024 x 1024 resolution, 256 colours from a palette of 16 million, couple this to the Enhanced chip set (New Agnus and Denise) operating under Workbench 1.4 and add an Impact 68030/25 board, and you have what I strongly suspect to be the format of the A3000.

Dual Serial Board

● Whilst still in the hard-ware arena, ASDG have released a Dual Serial Board which does much as the name describes, it provides A2000 owners with two serial ports, just the thing for multiline BBS systems, and pricing is very reasonable at $US299.00.

GVP were also heavily promoting the IMPACT A500 hard disk and ram expansion module for the Amiga 500. This device makes available up to 102 Megabytes of auto-booting hard disk storage and two Megs of ram onto the expansion bus of the A500. Pricing starts from as low as $US599.00.

Animagic

● Aegis have released *Animagic*. This program gives the desktop video user a vast array of IFF and Anim editing features never seen before on the Amiga. It requires one megabyte of memory, though Aegis suggest three would not be too extravagant. Included is a library of Digital Video Effects such as page spins, flips, swoops, shatters and so on.

The manual states over 9025 variations on each video effect supplied are possible! Aegis have also supplied a 68020/68881 version of the program on the two disk package. All screen modes are provided for, including HAM, halfbright and interlaced images.

PAL screen sizes are also supported, with *Animagic* being able to display custom screen sizes of up to 1008 x 1008 pixels. The latest version of the player program, Showanim is included, with additional effects of colour cycling, ping-pong play and timing control being present. The possibilities with this program are endless.

For instance by specifying more than one source file, an image can be tumbled in the horizontal axis, so that when the reverse side appears, a second source image will be displayed on the back of source one. Animations can be merged with ease, drop shadows can be added, with control over colour, offset and transparency. Animations can be superimposed over any IFF background, a screen can be filled using a tile option, which puts reduced copies of any image over the screen on a user defined grid. Horizontal, vertical, zigzag or random screen fills are available. I could go on, suffice to say the list of effects is vast. *Animagic* has completed the ensemble

by providing three dimensional control over files, and the ability to control a unique colour palette of each frame of an animation. Wire frame preview modes allow a quick look at what the final effect will be, but even so, rendering times are surprisingly fast. Aegis are on a sure winner by pricing *Animagic* at $US99.00.

DTP upgrades

● *Professional Page 1.2* by Gold Disk is out, though not a major upgrade, it does pro-vide support for *Professional Draw*. The upgrade for existing users of *Pro Page* is $US20.00. I also noticed *City Desk 2.0* on the shelves, with improved editing features and the addition of Macros being the most obvious improvements.

Design Programs

● What seemed most prevalent were the new animation/video/design programs and hardware. For example *Caligari*, the three dimensional modeling and animation package, has been released in a "home user" version priced at under $US200. Byte by Byte have also released *Sculpt Animate 4D Junior* priced at $US150. Though not as sophisticated as the full blown version it does offer polygonally shaded 3D animations to the home user at a reasonable price.

Gold Disk have released *Design 3D*, yet another three dimensional object design program with limited animation. The program however does have a good user interface, and allows real time wire frame rotations of objects during the design process. It comes on two disks and is priced at $US99.95. At the other extreme Digital Creations have introduced a SUPERGEN 2000S genlock and FRAME-BUFFER/DIGITIZER, the former fitting into the video slot of the A2000 and supporting Super VHS, and the latter supporting a 16 million colour digitizing/paint capability with animations and colour cycling available on 256 colours - remember what I said about the A3000? QED!

grams running at once. Ah, the joys of multi-tasking. The beauty of it is that whenever software is written for X11, it will run on many different machines. GFXBASE ties all this in to the Amiga. And they have a "Boing" mouse, with 3 buttons and sturdy design, which is useful for such applications, as well as the A2024 monitor/software, and totally compatible with all Amigas (and considering the lousy A500/2000 mouse it might be worth getting just for rodent reliability). You need at least a megabyte of ram and 5 meg of mass storage, such as a hard disk. GFXBase, 1881 Ellwell Drive, Milpitas CA. USA. TEL: (408) 262 1469.

A video about video

● A 30-minute video is available, instructing you how to incorporate computer graphics into various video projects, and includes tips on titling, genlocking, special effects, etc. All graphics on the tape were created on the Amiga, and the tape is in VHS format, costing US$41.50 from: Video Graphics Techniques, Cape Fear Teleproductions, 605 Dock St, Wilmington, NC 28401. Tel: (919) 762 8028.

Run IBM directly on your A500

● A group called Condor International in Britain have a black box available which sits on top of your A500, and contains 2 meg of Ram, an IBM XT processor, 30 meg autoboot SCSI hard disk, realtime clock, 3.5" and 5.25" drives, a multi-synch monitor and an AC power supply!! All this for 2699 pounds sterling, including the Amiga. Sounds like an interesting box for anyone who wants the lot. They also have the same setup without the MS-DOS & monitor and 5.25" drive options for about 799 pounds. Information from them at: 31 Palace St, London SW1E 5HW. Tel: 01 6309218. Also suits the A1000. Thanks to Tom Moore for this information. [By the way, normally you can access the "Pounds sterling" symbol by pressing ALT-L together...]

Maestro modems - 9600 BPS and fax

● The gentlemen at Maestro tell us that before too long there will be a ROM (Read Only Memory) change available to upgrade your 2400 baud Maestro to 9600 baud. For the speed freaks and overseas downloaders. And they say it is very likely that there will be a modification to the modem by the end of the year to enable it to emulate a FAX - not a bad idea, since the Amiga is multi-tasking, and so you could operate the fax side in the background. It also beats buying a brand new fax. Information from: Tel: (043) 682277. We've had reports too that these people give good after-sales service.

Forms in Flight II

● Centaur Software is offering this program for $70 if you also send in the manual cover or original disk of your current animation or paint program. Send to : 14040 Tahiti Way, Suite 528, Marina Del Rey, California 90292. Tel: (213) 8215995. This company also puts out the "B.A.D." Disk accelerator, which speeds up access to floppies astoundingly, ($49.95 RRP).

City Desk 2.0

● This upgrade has been touted for months - a reader paid for his five months ago, and still hasn't got it! They advertise to send in $US35 plus your original program disk and manual plus $US5 overseas p&p. To: "MicroSearch", 9896 S.W. Freeway, Houston, Texas, 77074. Tel: (713) 9882818.

Quarterback 2.0

● Send in your original *Quarterback 1.0* disk and US$15 (& air mail costs) to: Central Coast Software, 268 Bowie Drive, Los Osos, CA 93402.

Tel: (805) 528 4906. This company puts out some other excellent utilities, such as DOS-2-DOS (allowing you to convert files to and from IBM or Atari format using either a 5.25" or 3.5" drive); and a similar program for Mac file conversion (see top of this file for more info).

C LTD SCSIDOS 3.0

● The hard drive utilities have been improved to support Workbench 1.3 - it costs US$20 for the 2 disk set with a printed manual. Ask for Item #3.0 ScsiDos from C LTD, 723 E. Skinner, Wichita, KS 67211. Tel: (316) 2673807.

B.A.D. (Blitz a Disk) FFS upgrade

● Send in your original disk or US$5 and get the version which supports the Fast-FileSystem from Mark Hellman, PO Box 1112, Wheatridge, CO 80034-1112. Tel: (303) 467 1718. Very useful utility for speeding up floppy and hard disk access.

Kickwork 1.3

● A1000 owners who'd like to have both Kickstart and Workbench 1.3 on one disk, or those who have KickWork 1.2 should get in touch with Amigo Business Computers, 192 Laurel Road, E. Northport NY 11731. Tel: (516) 7577334. ❏

LETTERS

Excelerator Plus

While reading the May issue I was disappointed to hear that the Excelerator Plus disk drive is poor when it comes to loading non-standard DOS.

I'm interested in obtaining a freeze machine type cartridge to make backup copies of many of my cassette games, and I am not interested in using it as a fast load cartridge. Since Freeze Machine and Action Replay work poorly on the Excelerator could you recommend another cartridge? I have heard that the Expert Cartridge works well with the Excelerator, is this true?

C Wallace
Newcastle, NSW

Ed: Try the Action Replay, but snapshot using the standard DOS save. (Expert Cartridge is an excellent programmer's tool and would also be a good choice.)

MPS-1250 - comparison unfair?

I have just read your feature "Picking a Printer" and I consider your review of the Citizen 120D/5200 or Commodore MPS 1250 unfair.

I think the problems you had with the printer were caused through you not being familiar with this machine. I own the Commodore version of this printer and none of these "problems" have been encountered.

As a matter of fact most of the features you quote for the Star NX-1000 are also true for the Commodore MPS 1250.

B Tonkin
Narrabri, NSW

Ed: Whilst the 1250 certainly has some fine features, we stand by the fact that compared to similarly priced models, it is sadly lacking in some basic are-

as. *We have since tested a second printer and found that it too had problems with paper loading.*

Help with 128D problems

In your June edition of A.C.R a letter from a 128D user was published who was experiencing some compatibility problems in 64 mode.

The problem is almost undoubtedly in the ROM of either (or perhaps both) the 128D's C64 mode or the 1571's 1541 mode. I agree with your advice that new ROM's in the 1571 should not have too many compatibility problems, however, many of this user's hassles may be alleviated by running a simple program when he powers up into C64 mode. It, basically, just resets everything using the routines indigenous to the 64 and 1541.

It would seem that in the process of emulating the C64, Commodore appear to have overlooked a few quirky little factors that are little known to even the technicians at CBM! Nevertheless, as the reset routines are exact copies of those in the real C64 ROM's, by resetting the system using these should make everything, shall we say - hunky dory.

I would suggest also, though (as a precautionary measure) to reset the emulated 1541 in a similar way as there is no reason why it would be free from suchan affliction.

Here's the simple proggy that should help:
```
1 D=8 : REM DEVICE NUMBER
2 OPEN 15,D,15,"U:"
3 FORX=1TO2000:NEXTX:CLOSE15
4 SYS64738
```
Another note to C128 owners. Make sure you power up in C64 mode. That is, hold down the Commodore key when switching on.

Typing GO64 will leave the 1571 in 1571 mode, albeit until the first disk access. If this is done, the above might not be neccessary at all!

I S Mulry
Kingswood, NSW

Warranty

Early this January (1989), I bought a copy of *Starglider II* for my Amiga 500. I returned the Imagineering warranty card within seven days to be able to claim the 90 day warranty and subsequent 365 day replacement service as outlined on the warranty card.

Not long after the 90 day warranty expired, I accidentally corrupted the disk and it refused to load.

I approached the dealer I had bought the game from. The shop informed me that the distributor of Imagineering products was Questor and gave me their address. I wrote to Questor asking how much it would cost to replace the disk. I clearly stated that it was my fault that it had no longer worked and would be happy to pay a fee for a replacment. After waiting for approximately two months, I received no reply.

Rather than writing again, I decided to ring the local offices. I was told to call STD to Sydney.

So I rang through to Sydney. I told of my problem and the person on the other end said, yes, I could get a replacement and put me on hold for five minutes (this was a long distance phone call remember) to find the details. She came back and told me that no, I could not get a replacement as the warranty had expired and the 365 day replacement service only applied to hardware.

The warranty card, with the words "Imagineering Software War-

ranty Policy" emblazoned across the top, explicitly states that software is covered by a 365 day replacement service.

I paid $69.95 for the game. The warranty card implies that I can expect to receive some sort of protection over my investment, yet the distributor is simply not interested. ... I have the original receipt and am wiling to pay for the replacement I think I am entitiled to. What should I do now?

Neil Booth
Carina, Brisbane

Ed: Firstly, it is a very wise thing to make a backup of your treasured programs. Secondly, I suggest you contact Imagineering again and speak to the Tech Support department. I have been assured they wil be able to at least try and help - or provide a new copy at a special price, Tech Support: (02) 697 8666

Amiga 500 - IBM compatibility?

I have recently swapped computers from an IBM to an Amiga 500, mainly for the animation features. There are however some pieces of software on the IBM that I miss. Flicking through the June edition of your magazine, I concluded that IBM compatibility for the Amiga 500 could be obtained by using a card expansion module then the Amiga 2000 PC/XT expansion card, this solution however is $1200+. Is there a sidecar (or some other piece of hardware) that I could use to give my Amiga 500 - IBM compatibility, that is somewhere in the price range of the A-Max (Mac emulator - June). If so who can I contact and will such a solution allow me to transfer files from DOS to the Amiga?

N Patel
West Footscray, VIC

Ed: There is no cheap way to add IBM compatibility to your Amiga 500. - Even if you did add an expansion chasis and then the bridgeboard, the end result would be of questionable value considering the price. What programs do you miss? It would be undoubtably cheaper and a better thing to purchase them new for the Amiga.

Entertainment Roundup
by Andrew Farrell

Flying Shark
Amiga/C64

● Flying Shark, a seemingly invincible aircraft is piloted with skill and daring. To take the controls of this brilliant replica of the coin-op from Taito you'll have to be pretty quick on the trigger.

The game takes you through five action-paced levels over jungles, deserts, railway depots and the high seas. Ferocious aerial dogfights against the might of the enemy are non-stop. As you travel deeper behind enemy lines the chances of being blown apart increase. Dodging the steady stream of fire is only half the problem. Gigantic aircraft carriers must be disabled and supply depots bombed in an all out attempt to halt the enemy in its tracks.

Produced by Firebird, distributed in Australia by Questor (02) 697 8666, *Flying Shark* is available for the C64 disk ($39.95) and cassette ($29.95) and the Amiga ($49.95).

Star Trek -
The Rebel Universe
Amiga/C64

● The action takes place in the Klein sphere where a massive rebellion has erupted between hordes of Federation Starships, Klingons and Ronulan Battle Cruisers. Captain James T. Kirk and the crew of the U.S.S. Enterprise must enter the quarantine zone and stop the revels - a mission fraught with danger. Hurtling towards the U.S.S. Enterprise are squadrons of Klingons. Use your main phaser banks and deadly photon torpedoes to defend the Enterprise against this, the first of many enemy attacks. Vector graphic battle displays portray the fight as you engage in battle.

Teleport landing parties to a host of different planet surfaces. Travel to 1000 solar systems and use the U.S.S. Enterprise's three-dimensional navigational system to plot your course around the solar system.

Produced by Firebird, distributed in Australia by Questor (02) 697 8666. Available for the C64 disk ($29.95), cassette ($24.95) and Amiga ($49.95).

3D-Pool
Amiga/C64

● Firebird is set to release a fantastic sports simulation game based on the current U.K. and European Pool Champion, "Maltese" Joe Barbara.

3D-Pool incorporates a unique "move around the table" feature which allows shots to be played from any position and you can spin the ball just like in a real game. However, before you enter the tournament to challenge Joe Barbara, improve your skills by playing against a friend and practising your trick shots. Alternatively, sit back and suss out your opponents during their practice sessions.

Battle your way through the gruelling knockout tournament against such cue happy opponents as Flash Harry, Mighty Mike, Catford Kid and Fast Freddy. You must win three rounds before you can pit your skills against "Maltese" Joe in the final, are you ready to take on the champion, or will you just be another victim of Joe Barbara, the 'Maltese' snooker champion?

More information will be available upon release of the title. Available for the C64, disk and cassette, and the Amiga.

Titan
Amiga/C64

● Titan is a futuristic spectator sport that's all the rage in Vegapolis. It involves guiding a power ball across artificial worlds by bouncing it off walls and up corridors with a magnetic bat. You are the bat, and the bat gets nine lives. The game is played by hitting and destroying cubes with the ball in an *Arkan-* *oid* fashion, a process complicated by the presence of the death icons, whose sole aim in life is to stop you completing all the levels and claiming the $1000 prize.

Titan has the graphics, "grab factor", and "staying power" to qualify it as a "frighteningly addictive" classic arcade game, that will have you wanting to play through to the early hours of the morning.

Produced by Titus, distributed in Australia by Questor. Available on the Amiga $59.95, C 64 cassette $29.95, disk $39.95.

Pirates
C64

● *Pirates!* the award-winning role-playing/adventure/historical simulation is Microprose's latest simulation to be developed for the Atari St and the Commodore 64. Designed by Microprose's top programmer and co-founder, *Pirates!* authentically simulates daring seafaring adventures on the Spanish Main during the 16th and 17th centuries. Players can choose from six different time periods, lavishly described and depicted on screen, nine types of ships, all accurate representations of the pirate vessels of the day, and over 50 different islands and nations to visit, trade with or capture.

Starting as a lowly apprentice with just one ship, players seek to improve their status and wealth. Towns can be attacked either by cannon fire from the ship or through a bold land assault. Ships can be pirated and boarded, and deadly duels can be fought against those captains refusing to surrender their goods. Buried treasure, just a map away, always holds the promise of everlasting wealth.

Available on C64 disk $49.95 and cassette $29.95 from Questor (02) 697 8666.

Honda RVF
Amiga
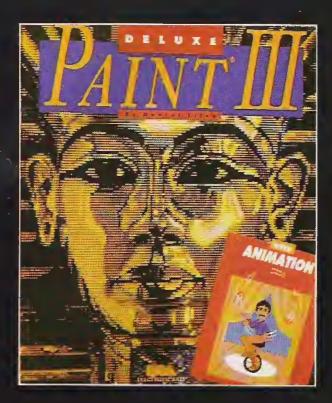
● *RVF* is, is said to be the most thrilling, exciting and realistic bike racing simulation ever to have been released on a home computer. Based on the Honda RVF Formula One bike as ridden by Joey Dunlop, current TT Champion and Carl Fogerty, current Formula One World Champion, the game was evolved with the full co-operation of Honda. Every detail possible was taken care of in an effort

to make this game the most authentic and most playable track racing simulation.

Set out as a novice in the Clubman class. Race against similarly skilled riders as you attempt to become Clubman Champion. Practice before each race in order to get to know the correct racing line and to gain as high a possible grid position. Start the race by getting the revs just right before dropping the clutch - too high and the bike wheelies out of control; too low and you labour the engine well out of its "powerband". Either way you end up watching the rest of the riders disappear into the distance.

Up through the gears into the first corner, a fast swinging left-hander that opens up, allowing you to clip the apex in fifth before changing up to top for the long downhill straight before the hairpin. 184 mph on the clock for the briefest on moments before piling on the brakes and kicking down through the gears for the first gear, 41 mph, 180 degree right-hander. You manage to keep to a tight inside line and pass two of the riders before accelerating hard up the hill, avoiding the oily patch left by a falling rider, to a sweeping left-hander.

Once qualified for National class racing, you compete on tracks, such as Donington, Mallory Park, Oulton Park, Knockhill and Silverstone. A higher class of rider awaits you as you then attempt to go for the National Championship. Occasionally, you will be invited to a race in the class above you. Win the National Championship and you are promoted to the Big League. International Class tracks include Imola, Hockenheim, Salzburgring and Suzuka, Honda's own international circuit. International riders show no mercy to a missed gear or wrong line into a corner. Prepare for a hard fight.

Fall off, and you stand the chance of breaking something on your bike, such as rev counter, speedo, or even losing say the third gear! However, a quick pit stop should fix all the bike's problems and then it's on with the race again. The attention to detail is amazing. The gear ratios and the acceleration characteristics are identical to those of the real bike. Bike-mounted video footage was used in the reconstruction of the world's circuits. A comprehensive manual details all the world's circuits along with statistics on the RVF 750 and the two Honda works riders.

Produced by Microprose, distributed by Questor $49.95 for the Amiga.

Two new brands in leisure software market from MicroProse

MicroStyle games deal with action subjects yet they have a depth which is staggering. MicroStyle games do not follow convention. Provocative - yes, contemporary - yes, stale and hackneyed themes - no.

● MicroStyle games are produced with the consumer in mind. Targeted at providing discerning yet adventure seeking customers in their late teens with a total software experience. It is the industry's first designer software.

● MicroStatus games are revolutionary. At the forefront of technology, they are the ultimate in software. Nothing else like it exists in the market. MicroStatus games stretch the capabilities of the computer. They both stimulate and perplex the mind sending the imagination reeling. This is the software computers have been waiting for. Computer games have just grown up.

Telecomsoft

MicroProse Software announce its purchase of Telecomsoft, the entertainment software division of British Telecom. Telecomsoft's games will be marketed by Medalist International, a division of MicroProse, under the MicroPlay label in the U.S. and by MicroProse Europe, the European division of the software company on that continent.

● Medalist will market between six and 12 products from Telecomsoft design teams every year, and six to eight for the remainder of 1989. Telecomsoft, which was established in 1984, is known for producing high-quality simulations, as well as exciting arcade games. It's popular titles include *Starglider*, *Carrier Command*, *Stunt Car*, *3D Pool* and *Savage*. MicroProse Software designs and markets a wide range of entertainment software for personal computers, include *F-19 Stealth fighter* and *Red Storm Rising*. It's products are available nationally and internationally through major distributors, retailers and mass merchandiser   ❑

SILKWORM

by Joseph A Levonian

*A*irwolf eat your heart out, 'cause here comes *Silkworm*, and he'll blow you out of this world, if he feels like being nice, so save up your pennies, pilots, as we have the ability to blow the enemy out of sight and out of mind.

Silkworm definitely scores in my record books as one of the most challenging, fast-moving and enjoyable games that you can play - as a helicopter pilot in the future where the enemy can dispose of you so easily that all you have to is blink. If you're one for the "blast anything on the screen" games you'll love *Silkworm*.

As the pilot you have the option to drive either an armoured jeep or an ultra modern helicopter. The game also provides you with a two player option which is a definite plus, as a partner will make survival and progression more enjoyable - you'll get a lot farther than if you were playing by yourself. If you don't have a partner do what I do, and place your disk box on the fire button for the jeep, and that'll take away a lot of your worries.

As the helicopter pilot you have dual fire, missiles which fire parallel to your aircraft, and a rapid machine gun that fires 45 degrees to your parallel. If you choose to drive the armoured jeep, you will only have mono fire, (unless you pick up a twin bubble which will then provide you with a dual fire system) yet you have the capability to move your weapon's launching system 180 degrees ie from your far back to your far front.

The ratio of both jeep and helicopter to the screen size is well balanced, and makes tight manoeuvres possible for your vehicle of choice. Even with two players there is an abundance of room to avoid the enemy and its weaponry, yet I wish you luck in doing so.

The battling challenges of *Silkworm* takes place on a two dimensional battlefield which will involve you in either shooting ground machines or flying aircraft. You also have the ability to shoot the enemy fire. The enemy also has the same ability, and it most certainly uses it.

The background terrains on the planet are of a simple appearance yet have a good colour quality so as to provide a 3D feel to the area of the planet you're on. Each different section of the planet has a unique feeling that provides your eyes with journey, instead of boredom.

The enemy that you face in the game comes in all different shapes and sizes. You have the honour of being confronted by landmines, rocket launchers, missile bases, tanks, armoured vehicles (both land and air) and other weaponry that will not only blow your mind, but also your vehicle.

At the end of every level you are confronted by an ultimate challenge which maybe the humongous gunship helicopter, the gigantic tank or one of the many other nightmares Buck Rogers would have had.

The sound effects throughout the game add character to the battles with the sound of missiles being destroyed, armour being penetrated, and the gloomy sound of reality when your ship ends up in atomic pieces.

During game play you can improve your machine's capability by destroying mines, then picking up the temporary shielding you are rewarded with, or you may destroy specific enemy crafts and gain the ability of rapid or dual fire by collecting the bubble they leave behind. Take these gifts, fellow players, as you will most certainly need them.

The level of game play difficulty is hard and challenging, yet it is not impossible and does not frustrate you, but it urges you forward to try and reach the next level. You don't get the chance to want to give up in this game like other shootem up games which are either impossible to achieve in, or simply get boring after a short period of time.

Well, if you're the type of person who enjoys responsive controls at your finger tips, and loves to see a path of destruction left behind for the enemy, this will be the challenging game that you've waited for. I was so impressed I tried to buy the company. ❑

AMIGA C=

GUNSHIP

by Joseph A Levonian

D o you dream of flying your own AH-64A Apache through perilous missions that will lead you from the training fields of the USA through to the battlefields of South East Asia, Central America, the Middle East and Europe?

If so, *Gunship* the Apache helicopter flight simulator is the perfect game for you. As the pilot of your Apache you must fly your way through the war zones of the world using an amazing array of advanced weaponry that the real Apache pilots use. These vary through laser guided missiles, radar and infrared warnings, night viewers, cannons, rockets, jammers and many more functioning display units and operating systems gauges.

The cockpit is the main control panel used in flight. You "see" the landscape and the enemy targets through the armoured glass as you fly through your designated mission. The cockpit's instrumentation is very impressive, with every status panel being fully functional and significant in the welfare of your helicopter during flight.

The internal graphics of the cockpit are impressive with a variety of colourful lights and displays changing in relation to their function in the game. While your systems are clear all your displays will be green, then if your helicopter suffers damage from enemy attack your panel display will change from green to orange to red depending on the amount of damage sustained.

The outlook you have from within your cockpit is of a simple yet very effective 3D nature, whether it be the enemy you have sighted with your TV magnifier (which can enhance the view by 32 fold) or the terrain formed by the mountainous plains and the green grass which blend in with the other features of the game to form a realistic background.

The sound effects are of a fairly realistic quality, varying from the sound of your helicopter blade accelerating to the sound of the enemy gunfire exploding outside, yet my favourite sound is the noise of the missiles you have just fired, especially when they hit their target.

Me being as smart as I am, figured out that I could play the simulator without reading the instruction manual at all. I was wrong. This is one game you cannot just jump into, as before gameplay you go through a series of compulsory options, ie vehicle identification, choice of duty assignment, choice of easy or realistic flying, an intelligence report, a sector map you use to plot and find the enemy prior and during your flight, you even have the option to call in sick if you don't think you can handle the mission. The options don't end there either.

Once I got through the preflight options I decided to go out for a joy flight to downtown South East Asia where I, Mr Cool, would be a Rambo and blow the enemy into a million pieces. I lasted approximately three minutes, then I decided I had better read the booklet first.

The booklet is an essential part of the game even though it isn't on the screen. It contains flying instructions, explanation of cockpit instruments, principles of flight, weapons and military strategy techniques plus a lot more interesting and essential knowledge for gameplay.

As a beginner your gameplay will start with training in the USA where you are placed in an easy situation in which the enemy only fires blank artillery at you, so even though you may get hit, you will not sustain any damage. Before playing your first game, take my advice and watch the demo run a few times as it will make your gameplay so much easier, especially if you look at the controls as it is flying.
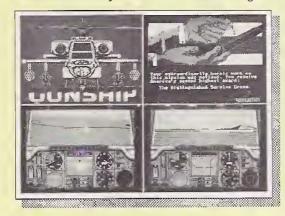
I personally found that joystick control of the game was too hard, as it would either oversteer or understeer making the game annoying to play. I decided to try the keyboard instead, and even though it was hard to start off with, I found it became easier and more enjoyable as I progressed and gained more experience. The overlay which is provided also helps make keyboard use much simpler.

Training in the USA isn't too hard as you don't sustain any damage, otherwise it would be difficult. I advise you to stick to training for a long period of time as the real missions are very (and I mean VERY) difficult to start off with, and you won't last too long, but don't let that get you down as the more you progress the further you will want to go on.

What I enjoyed most about this game was the unlimited amount of options, that let you decide how you want to play the game rather than the game leading you on. The format of the game and the manual also impressed me. Much work that has obviously been done to provide full detailing of all relevant knowledge to give the gameplayer an atmosphere full of adventure and challenge, the type of feel which makes you want to go that one step further.

If you're looking for a game that has more options than an income tax form, and requires you to read and learn a bit, this simulator is for you. But be warned - this not a simple let's go kick their butt game. ❑

AS AUSTRALIAN AS OUR KOALA

3 YEAR GUARANTEE

Koala Courtesy Lone Pine Sanctuary

What the computer magazines say:
"King of the league" — Commodore Amiga Review, Dec. '88.
"Stands up to a battering" — Amstrad User, Feb. '89.
"I have tested this stick extensively, and can thoroughly applaud the solid yet functional design" — Sydney Morning Herald, Jan. 20 '89.
"Aussie stick comes up trumps" — New Computer Express, U.K.
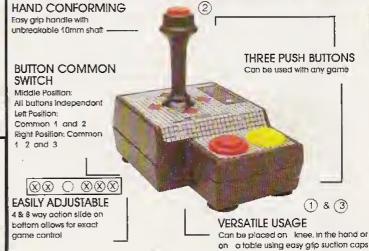
Dealer enquiries to:
Multicoin Amusements Pty. Ltd.
17 Wrights Place
Labrador, Gold Coast, Australia, 4215
Ph: (075) 37 5711 Fax: (075) 37 3743
W.A.
J. Mills Agencies
Ph: (09) 344 1660 Fax: (09) 345 1308

AUSTRALIAN MADE

HAND CONFORMING
Easy grip handle with
unbreakable 10mm shaft

②

BUTTON COMMON SWITCH
Middle Position:
All buttons independent
Left Position:
Common 1 and 2
Right Position: Common
1 2 and 3

THREE PUSH BUTTONS
Can be used with any game

Ⓧ Ⓧ ◯ Ⓧ Ⓧ Ⓧ

EASILY ADJUSTABLE
4 & 8 way action slide on
bottom allows for exact
game control

VERSATILE USAGE
Can be placed on knee, in the hand or
on a table using easy grip suction caps

① & ③

Jordan vs Bird!: One on One

by Richard Silsby

Basketball, an American game - but as we have been seeing over the last few months, a game that has an increasing popularity in Australia. Especially with teams like the Sydney Kings doing so well.

Now here is your chance to beat the boards with two of the all-time best players. Not just to be a spectator cheering them on, and watching them play from the sidelines, but Michael "The Slammer" Jordan and Larry "The Shooter" Bird have agreed to take you on at your place, in your time. They are ready to see whether you have the stuff to get out there and slam, jam, sink and swish it like the best.

You'll be up against two of the true specialists of basketball. The Bird is one of the all time greatest three point shooters,

and Michael Jordan is one of the greatest scorers in basketball, especially through his prowess in the slam dunk.

Not only will you have the chance to take on Jordan or the Bird at their own game but also you will be able to settle the arguments by seeing who is the best, Jordan or Bird, in the ultimate contest of One on One basketball.

In *Jordan vs Bird: One on One* there are three ways in which you can get out on the court and let yourself go. These are presented in the main options menu, which is shown after the opening credits. You can spin, block and jab in the One on One, go Airborne with Jordan in the Slam Dunk, and finally swish a few from the three point line with the Bird

For One on One you can go into a Full game, play the first to 15 or 11, or just warm up with a few easy shots. In the Full game you can play for 2, 5, 8, or 12 minute quarters, with a full printout of the statistics of your play in between quarters, analyzing all play.

Then in the Slam Dunk contest you have three options-going straight into combat with The Slammer in the Slam contest, where you choose three slams to perform, in trying to get a better score than the computer or your friends. You have a choice of ten slam dunks that you can perform. These are Kiss The Rim, Twister, Air Jordan, Two Handed Hammer, Doctor J. Jam, Windmill, Back Slammer, Statue of Liberty, Skim of the Rim, and a Toss Slam or A-La-Oop.

Then finally you can attempt some three-pointers in a competition, shooting as many as you can in sixty seconds, or just attempt some free shots in the Warm Up area.

About the game

● In One on One you are competing against the other player on the court, either the computer or one of your friends. Your aim is to try to get more points than the other person, not only by getting

your own shots, whether slams, three pointers or field goals, but also making steals, rebounds and fouls from the other person so as to score more points.

In the Slam Dunk competition you are again competing to score more points than your opposition, but these points are given by judges watching your style of take-off, creativity and jam power.

During the three point competition you are required to attempt as many three point shots as you can in the sixty seconds. These shots have to be attempted outside the three point line and from five different points around the three point circle, with the two vital points of speed and accuracy a telling factor in the story of your success from the three point line.

If you decide that you are going to practice against the computer so that when you compete against your friends you won't be laughed off the court, you have four settings so that you can slowly improve your game play and bring it up to the standard of the Pro's.

Game play

● The control that you have over the players is very good except for the slam dunk competition. In One on One you can fake, drive shoot, rebound, slam, steal, spin, block, and even finger roll, so that almost anything that you can do on the court you can do in the computer game. This is good because it makes for an evenly and tight matched game, especially with the pressure of the shot clock and crowd around.

In the Slam Dunk competition you have little control over your player after the take off other than to toggle the joystick to make him spin or swivel, which is a bit of a let-down for game play.

In the Three Point Shoot out you have all the control that you could possibly need and want. Because all you have to do is pick up and shoot, what could be simpler. With the sixty second timer it makes it so much harder, and much more

fun because you would have to be pretty good and very accurate to get all 25 through in one minute.

The pictures on the C64 are not the arcade style pictures, but this is a small drawback for a game with such depth and interest crammed onto two sides of one floppy disk. Sound effects and music are almost non-existent except for the opening credits and the winners' screen.

All in all this is a great game for any with even a small interest in basketball, because it well simulates the action of a true basketball game. I enjoyed it so much that I have been watching all the basketball games on television as well as having a bit of a run on the court. It was a game that truly held my interest for many, many hours and I find myself often going back for a quick workout.

So go out, and do what you have to do, to get a look at *Jordan vs Bird: One on*

One by Electronic Arts, before the final whistle blows meaning that you have missed out on the opportunity of playing against the big boys of Basketball.☐

Review copy from ECP (075) 963 488. RRP C64 $31.95.

The Dark Side!

*H*ere's yet another game in the StarGlider II league with some exceptional 3D flight animation and a strong adventure component. Richard Silsby strapped on his Jet Pack and headed out to the Dark Side for this report.

Before we go any further, you must swear to complete silence, to avoid mass panic on Evath.

As you know, many aeons ago all humanity as we knew it, moved from the Earth because of its impending destruction and finally settled down on the planet of Evath.

We lived here without excitement until the Ketars, formed as a gang in the streets of The Bronx, decided to caused havoc on this planet. They were then expelled to the dark side of the distant moon Tricuspid. From our computer checks there has been no movement on

the planet for the last 200 years. We believed that they had become extinct.

That was until late yesterday afternoon, when our computers picked up massive amounts of heat energy coming from the planet surface. So it seems that the Ketars have spent the last 200 years planning their revenge on us peaceloving Evathlings. So determined are they, that we believe they have built an incredibly powerful laser on the dark side of Tricuspid.

So your mission, should you accept it, is to travel around the moon Tricuspid along the surface and through its maze of underground corridors, searching out the Energy Collection Devices that give their power to the laser weapon, and destroying them in sequence so as to prevent the activation of the laser.

These ECDs have to be shot, to be disabled. But if an ECD is connected between two other active ECDs then the device will regenerate immediately. Each time an ECD is destroyed it will give you extra time. This is the most important resource you have, so use it wisely.

While searching these ECDs out you will have to watch for Plexors. These are tank like defences placed around Tricuspid. They will attack you if you are within their range. The attack they make isn't all that devastating to begin with as your metal suit will shield you from the first few blows, but after that you are in danger.

Ketar technology is ahead of our own in transportation devices. The Powerporters are your ticket to a free ride to another part of the planet. On your journey you will find Telepod crystals which when collected give you the power of being transported around the planet.

Along with the means of transportation left behind by the Ketars you have your own portable means of transportation. This is a Jet Pack which allows easy entrance into the various corridors littered around the planet. Also you can control your step size from two old metres to 250 old metres, which is good for quick exits from the paths of Plexors.

Our Data Crew have extracted some

cryptic clues from a Ketar spy, and these are essential reading for your survival. If you successfully decipher thesm you will be part of the way into completing your mission. Along with these cryptic clues, there are other hints contained in the short instruction manual, which is a more important start than to even boot your disk.

Along your mission you can choose to have soothing music or interesting sound effects played to you. For the first time I found a game in which the music almost went unnoticed, even turning up the volume didn't help. This makes playing more enjoyable because you aren't annoyed by music or sound effects blaring at you.

When using your display module you notice a border around the central display. This contains vital information on fuel and shield indicators, ECD network efficiency rating, message window, your co-ordinate position, altitude, compass, teleport crystals and the fatal laser charge timer. Your sight supplies you with colourful three dimensional detailed landscapes, well designed by the Micro Status laboratory. These are truly pleasing to all the senses, allowing more time to concentrate on getting out of the predicament that you are in.

Personally, I spent so much time on this game that I haven't had time to look at another one. I'm still stuck trying to find the last three ECDs.

This is not only a game that will appeal to those who enjoy adventure games but it will be a good start if you haven't played any adventure games before. All in all your adventure to the Dark Side will keep you engrossed for the rest of your computer playing years because good detail and unusual depth have been included. So take on the mission to save the world and venture to the Dark Side before all time runs out! And even if you don't save the world you will enjoy trying. Cost? Who cares!   ❑

LORDS OF THE Rising Sun

by Phil Campbell

I don't want to make myself sound old, but when I was a lad we only had black and white TV. We made do, of course - and somehow, the programs that flickered across the old blue-grey screen were just as vivid as any of today's technicolour marvels. Some stood out among the crowd, none more than "The Samurai." Everyone I knew followed the poorly dubbed adventures of Shintaro, the Japanese war-lord - everyone spent hours practicing the art of jumping backwards into trees, and of throwing deadly star-knives crafted carefully from Peters Ice Cream tins. Ah, the good old days.

Cinemaware, the software house famous for their "interactive movies", have tapped into a rich vein of nostalgia with the release of *Lords of the Rising Sun*. This is fair dinkum Samurai stuff - a twelfth century quest to become the Shogun, avenge your father's murder and redeem the family honour.

This is a complex game. You will be called on to command vast armies of Samurai warriors, to defend yourself against Ninja assassins, to lay siege against huge fortresses, and even confront your enemies in hand to hand combat. There is something for everyone, though I must warn from the outset that action freaks will have to be patient - the arcade-style sequences are separated by long sections of strategic decision making.

As usual in a Cinemaware title, the graphics are first rate. This is an artistic show-piece. Even the Character Selection screen in the opening moments of the game is masterful; two life size Japanese faces in profile, Yoritomo and Yoshitsune, who open and close their eyes as you select and deselect them with your mouse pointer. This is subtle, and very, very life-like. I moved back and forth between them a number of times just to admire the effect.

Your choice here has some effect on the overall style of the game. Yoritomo is a consummate politician and strategist, while Yoshitsune has incredible skill on the battle-field. The former will tend to negotiate alliances, the latter will be inclined to slug it out. Your aim, of course, is to acquire skill in both areas - but this will only come with time and experience.

The main game screen is a beautiful scrolling map of twelfth century Japan. Again, this is a display that you will want to play with. It is highly detailed and delicately drawn, and scrolls back and forth as if it is gliding on silk. This is a fine piece of programming.

The map shows 51 distinct castles, monasteries and cities, with names like Kagoshima, Osumi, Usuki and Iwami - and many of them fly tiny flags showing which of the warring dynasties is in control. Yoritomo, for example, has Kagoshima and Yoshitsune has Shimonseki. I'll settle for Sate Chicken with fried rice.

The trick now is to move your armies around the map, capturing strategic locations in a bid to finally overcome all the territory of the wicked Taira clan. Movements are initiated with the mouse - a quick click and drag will send an army on its way. When you arrive at an enemy castle or city, the choices are obvious - attack, or negotiate an alliance. The decision is yours, but will largely depend on the state of your army and the strength of the opposing forces.

Battle sequences are highly detailed, and require a fair degree of concentration. All your men are shown on the field - understandably, in very small scale. Again using your mouse, you must strategically arrange your archers, foot soldiers and mounted troops to gain a tactical advantage - then hit the enemy troops with a barrage of arrows, and storm them at their weakest point. Easy enough in theory, but the other army is doing exactly the same thing, and usually they do it better. My army has been decimated every time. There are other action sequences - storming Castles, for example - which rely on similar techniques.

I haven't yet been through a "close encounter" with a Ninja assassin, but judging by the screen shots on the box, it should be a lot of fun. In fact, after two or three hours play I feel as if I am just scratching the surface of the game.

Lords of the Rising Sun is a large scale challenge - in fact, it is claimed that this program features "one of the largest universes ever created on a computer." Strategy game fans should be delighted. Anyone else should at least be impressed.

Top class graphics, nice oriental sound effects and a long term challenge make *Lords of the Rising Sun* a first class package. Nip on out and grab a copy. ❑

PIONEER PLAGUE

by Phil Campbell

N ow here's a good idea. Imagine a convoy of self duplicating industrial robots, programmed to roam the universe creating earth-like environments. No matter what stands in the way, they can fill entire planets with hi-tech architecture in just weeks. Darling Harbour everywhere, generated by multiple electronic Laurie Breretons.

But something has gone wrong. Intended to detect planets that were civilised already and leave them untouched, the robots are now rampaging through the universe unchecked - deserted asteroid or high density civilisation, the treatment is the same. Whole planets are rebuilt, whether they like it or not. Traffic Tunnels snake under the harbour, bridge tolls mysteriously increase, high rise buildings spring up overnight - and there is nothing anyone can do.

Such things, of course, could never happen in real life. This is the fictional scenario of *Pioneer Plague*, a ground breaking new game for the Amiga. Ground breaking indeed, for this is the first game ever to use all 4096 Amiga screen colours at once.

A note of explanation is in order. The Amiga is a remarkable computer, noted for its ability to create coloured video images. It is advertised as a 4096 colour machine - and it is. But using all the colours at once is quite a trick. 32 is chicken feed, 64 is a breeze - but to display more, a special graphic mode called "Hold and Modify" (HAM) must be used. A number of specialised art programs let you do this - but until now, nobody has bothered to use the feature in a game.

What does this mean to the naked eye? Perhaps not as much as you might expect. The most striking feature in this game is a multi-coloured space pod which floats back and forth across the screen. The effect is similar to the colourful refraction pattern on the surface of a soap bubble - or, for the more technically inclined, the business side of a compact disk.

It looks nice. The other tell-tale signs that HAM mode is in action are rather more subtle. Objects seem somehow smoother, there is a greater feeling of depth; far more tonal variations have been used in shading and highlighting solid objects.

All in all, *Pioneer Plague* is a fine looking game, and its beauty is more than skin deep. The graphics are matched by a classy repertoire of sound effects - with a great music track - and addictive gameplay.

Your task is to pilot a rather large space ship back and forth across infested planets, bombing the marauding city builders before they spread across the entire universe. There is plenty of opposition - this is a genuine shoot-em-up, fought out above a smoothly scrolling city landscape. Avoid or blast the robotic defense systems, clean up the planet, and fly back to your multi-coloured mother ship - thence to yet another planet, and yet another battle.

Playing *Pioneer Plague* generates a pleasant mix of satisfaction and frustration, the sure sign of a successful game. But I have some complaints. The playing area was too small, my ship too big, so it was hard to react quickly enough when enemy ships slipped onto the screen. And the copy protection scheme, a complex combination of paper star-maps and transparent overlays, was poorly explained. The manual mumbles something about reference numbers which must be correlated and entered at a certain point in the game - trial and error was my only option.

Even so, these are minor problems, mere blemishes. This is a game that will keep you playing for a long time to come - sit back, dim the lights, turn up the stereo and enjoy it. ❏

AMIGA

Review copy from Pactronics (02) 407 0261. RRP $70 (Amiga only).

Phantasm

by Eric Holroyd

Here's one of those mixtures of arcade and graphics adventure -cum- strategy games which appears to have been ported from the Atari ST. The screenshots on the packaging are taken from that version and show somewhat stylised spacecraft and pyramid-like buildings.

On-screen graphics are, of course, better than those on the packaging due to it being an Amiga version, and I wished once again that software houses would publish programs in packaging specific to the computer rather than trying to do it on the cheap and cover all machines with one lot of instructions and in one box.

That apart, this is a pretty good concept: You're a day-dreamer and flat broke, moving from one fleapit to another, with dreams your only relief from the awful reality of life on the run from the Poll Tax collector, who is hounding you from town to town (Poll Tax is the latest real-life tax in the UK and is apparently a head-count tax per household based on the Electoral Rolls).

In your dreams you're whisked away to the future, where you're the pilot of the spaceship Pegasus with the job in hand being to find and destroy eight re-constitutions randomly placed on the moon. These things are capable of putting back together the remains of other enemies you may destroy in their immediate area so you have a constant battle to keep it all under control.

To help with all this you have tools such as the: Aerial Direction Finder, On Screen Radar, World Map of the Battle Scene etc, together with Speed Boosters and a "Phloxer Laser" weapon. The thing to watch out for is the female apparition known as the Phantasm. Is she real or just another dream? You have to try and find out whilst the enemy lasers are going berserk, and you'll need to keep checking on your shields and fuel during all this so it's quite a busy game.
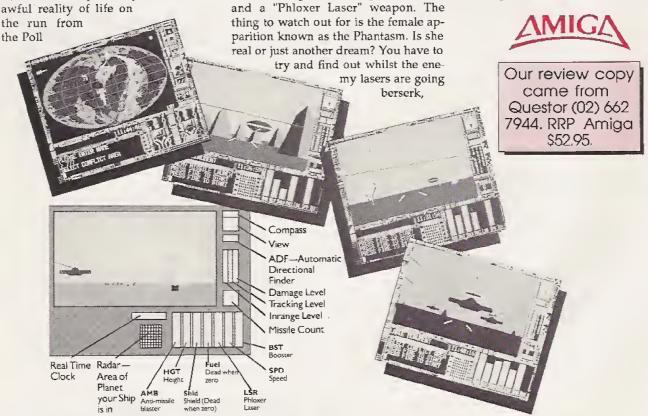
There are four levels, with the first one being the Training Level where it's difficult for you to be destroyed but you can't score. This is a good idea in a game, I think, and it always helps if you've had a chance to master the control methods of a game.

Included in the package is a handy card showing all the relevant bits and pieces on screen for easy reference, another nice little touch to help with your gameplay.

This one is a little different in concept and has some good components to interest players of this type of game. ❏

Compass
View
ADF—Automatic Directional Finder
Damage Level
Tracking Level
Inrange Level
Missile Count
BST Booster
Real Time Clock
Radar— Area of Planet your Ship is in
HGT Height
AMB Anti-missile blaster
Shld Shield (Dead when zero)
Fuel Dead when zero
LSR Phloxer Laser
SPD Speed

GET MAXIMUM OUTPUT FOR MINIMUM INPUT.

Since you've put in a few hard earned paychecks into a Commodore system, how can you be sure you'll ever get more than just a few video games out?

Well, you could start by booting up GEOS 2.0. The hard working software that's easy to use and easy on your wallet.
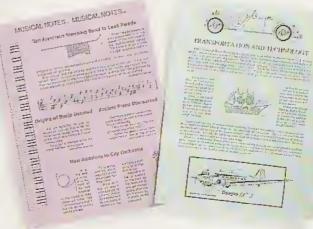
You see, with GEOS 2.0 you don't need to memorize complicated keyboard commands. All you need to remember is this:

Point and click.

GEOS 2.0 shows you options, and you point to your selection. Then all you do is click your mouse or joystick.

Pretty simple, huh?

WE PUT A LOT MORE IN, SO YOU COULD GET A LOT MORE OUT.

GEOS 2.0 squeezes the absolute maximum out of Commodore 64's

and 128's with an array of applications you can use millions of ways. In fact, millions of people do.

The important thing is that with GEOS 2.0, you can create outstanding documents with outrageous graphics. That's because GEOS 2.0 includes geoWrite (an advanced, full-featured word-processor), and geoPaint, a graphic workshop with over 32 different tools and patterns.

With geoPaint, you can draw almost anything. Invert, mirror or rotate it. Then stretch and scale and save it in your GEOS 2.0 Photo Album for use later. You can mix text and graphics. Or trade them back and forth.

GEOS 2.0 even comes with its own deskTop, which lets you manage your files and disks easily and efficiently. There's a calculator, note pad and alarm clock, too. And GEOS 2.0 is LaserWriter™ compatible. Which means you get a better looking document and a harder working system that's easier to learn.

INCREASE YOUR OUTPUT WITH A TURBO.

For flat out fast performance, GEOS 2.0 even comes with a diskTurbo, which cranks up your Commodore five to seven times its normal operating speed.

Now, if all that weren't enough, it also converts other programs' text in a heartbeat. And then checks your spelling with geoSpell. And comes with a mail merge for stamping out labels and form letters. And eleven built-in fonts. And a file manager.

The bottom line is that GEOS 2.0 can do just about anything expensive PC's can do, including

one thing they can't:

Share data with all our other GEOS 2.0 applications.

A HARD WORKING FAMILY.

Now, if you like the idea of what GEOS 2.0 can do by itself, just think what life would be like if you could share text, graphics and information amongst a whole family of applications.
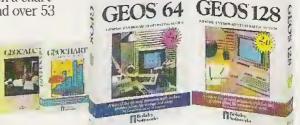
Well, that's what you get with our entire GEOS line. There's a spreadsheet, a database and a desktop publisher. Not to mention a chart program, accessories and over 53 additional fonts.

So if you'd rather take more from your Commodore and less from your wallet, insist on GEOS 2.0. For a minimal investment, it'll do more than just make your documents look a whole lot better. And that could pay out handsomely for you.

GEOS 2.0 . . . C64, RRP $89.95
GEOS 2.0 . . . 128, RRP $89.95

Virus Alert!
A serious look

As expected, the number of viral strains has increased. Protecting yourself is now quite a business, that involves not one but several utility programs. Oben Candamir explains the mysterious virus problem, and how to deal with current versions.

In the beginning the Amiga was one of the greatest all-purpose computers ever made, but it like other computers has been plagued by viruses. In this article we will examine this virus mystery closely. I know that a lot of users (especially beginner Ami-users) don't know or are ignorant to the existence of viruses. It is to these people and to the demise of virus writers that this article is dedicated.

What is a virus?

A virus in simplest terms is a small program which if run would be able to replicate itself many times and hence spread. It is a mirror of its biological counterpart. Let's go through the steps a virus must go through:

● Invade the host with no warning.
● After invasion, it must be able to run itself somehow.
● Do its stuff: display a message, destroy data, or whatever.
● Have a mechanism for duplicating.
● Be able to survive a warm reboot. (CTRL-L/Amiga-R/Amiga).

The first and second are done easily enough. The Amiga at boot time loads in the first two sectors of the disk (called the boot sectors) and starts executing the program at the 12th byte or 4th long word.

The bootblock is 1024 bytes in length, so a virus must be 1024 bytes or less in order to be viable. This program on an ordinary Workbench disk is simply a small routine which finds the DOS library and then jumps to a program in Kickstart which opens the Startup-Sequence file on the disk (in the S directory) and executes it.

On a virus infected disk, the virus au-thor cleverly uses a 'wedge program' which executes instead of the normal DOS program. After setting up, it jumps to the normal routine which all boot-blocks must do sometime. Now the ordi-nary user doesn't realise anything at this stage because the virus is transparent in operation - it doesn't do anything strange which is easily visible.

Not all disks having a non-DOS boot-block are virus infected. Software houses often use the bootblock to start up their code to make it hard for users to 'hack' it or copy the program. This is the reason why viruses destroy commercial disks which use a custom bootblock. A virus may write itself onto any disk which is in-serted (with the proviso that it is write enabled - no virus can or ever will for that matter be able to write onto a write pro-tected disk as some dogmatists claim). Few virus strains bother checking to see what was on there originally. A ruined boot block on some games especially can make your disk useless and you misera-ble!

How a virus survives

The way in which a virus escapes re-boot is a little more interesting. The Ami-ga has a library called the "exec.library" which is opened automatically when the computer is initialized (turned on at the power point). After this initial power on and setting up of the exec library it is not set up again unless the computer discov-ers something wrong with the structure of it. The exec library is used through a structure in RAM called the 'ExecBase Structure'. This structure is very long and contains the most primitive structures the computer needs to operate. Included here is a memory address called the CoolCap-ture() vector, to which the Amiga jumps at warm reset. (CTRL-A-A) It is easy now to understand how a virus could change this vector to point to itself and hence re-activate itself at reboot time!

Another way which viruses use to es-cape reboot is through the KickTagPtr() in ExecBase. This pointer was originally provided to developers so that structures, programs, or any kind of data could be retained in memory as if it was like ROM.

Virus writers have abused this origi-nal use and used it to preserve their virus codes in RAM. The well known Byte Ban-dit virus stays around in this way.

While we're on the topic of viruses running themselves and staying around in memory I want to outline other varia-tions to this theme:

1. Trojans

A trojan is written mostly by C pro-grammers who lack the skill to write as-sembly language code. It's not hard to see where Trojans got their name. Any-one knowing about the Trojan Horse of Troy will know the story of how the peo-ple of Troy awoke one day to find a large horse outside their city which was sup-posed to be a gift to them. When the horse was moved inside the city gates, enemy soldiers leaped out from the hol-low body of the horse and proceeded to invade the city. Now that the history les-son is over we can relate the story to com-puters. Trojans aren't run automatically by the system at boot time and this leaves only the possibility that the user must run the program file from the Workbench or CLI.

Usually this program is disguised as a gift, just like the real Trojan horse of Troy. It may claim to double or triple disk speed. The user, with mouth drooling, runs the program and after he does some-thing which the Trojan writer wanted (such as reboot with a write enabled disk) the program crashes the machine or for-mats the disk or something nasty! Some Trojans are just pranks which display a silly or obscene message. Not many Tro-jans are documented on the Amiga but I know of two for sure. These are:

● FloppyMusic (on a disk called POWERSTATION copiers; it plays some nice music with the disk drives step mo-tor, but when you stop it you find that you need your drive replaced!)
● Speed! (which I got once from a

Bulletin Board; it claimed speed increases in disk access but put read/write errors on the disk and more seriously scrambled the disk's bit map).

2. File Leeches

The name 'File Leeches' is just a term made up by myself to describe this kind of virus. Others have called them file viruses but I don't think this describes them adequately. Many people aren't aware that there could even exist such a thing. It is my view however that this kind of virus poses more of a threat to us than the outbreak of bootblock viruses we've seen in the last few years.

The reasons for this are that although a bootblock virus can be deadly, it is easily detected by virus killer programs which are constantly revised to accomodate the growing number of viruses. The point is that once a bootblock virus is detected by a virus killer or from a message it displays, it is easily exterminated.

File Leeches are undetectable by normal users as their source is unknown. When the user sees a silly message or has a disk formatted he checks the boot block with a virus killer and finds it clean.

How does it work? A File Leech attaches itself to a file which is called from the Startup-Sequence of a disk. We all know that after booting, the computer runs the Startup-sequence file in the s directory. The point is that this is automatic - just what is required.

The file which is run is now analogous to the bootblock; the 'Leech' has wedged itself into the program and now executes and behaves much like a virus in that it attaches itself to another file in the startup-sequence of another disk and so on. The real problem for the user is that unless they know the original lengths of all the files run in the startup-sequence they can't detect a file leech. This is because the leech takes up some space and a file originally x bytes long will become x+(Length of leech) long. If you discover a common length difference then you have just caught yourself a leech.

Often leeches protect themselves by random crunching. Crunching is a process by which space in a program is reduced by using special encryption and coding methods. When run, the program is first decrunched. Leeches may change

the efficiency of crunching to really confuse the user because each sample of the code will be different! This eliminates the chance of detecting the leech by analysing the binary code too.

What's the good news about all this? There is fortunately only one file leech known to us. The devious IRQ leech. This program is described in detail later.

Now that we've discussed all the different possibilites in virus technology, I'd like to describe the way in which viruses mostly duplicate. You'll recall from our earlier discussion of the ExecBase structure that it contained offsets and pointers to ROM routines.

One of these is the DoIO() vector which the Amiga uses to send instructions to external devices. The virus program usually makes a patch to this vector and points it to its own I/O processing code. This checks that the source of the call was to read a bootblock; if so it turns the read command of the call into a write and hence writes the virus to the disk. If it didn't check to see if the disk drive was the source then it may well by chance type a copy of the virus to the printer!

Viruses - the real things

There are currently fifteen known viruses, one file leech and a virus which I accidently found on an imported graphics demo disk. Let's now look at these in turn. (Additional virus strains discovered and documented since this article are described on the Anti-Virus PAK from Prime Artifax, by the Alliance - (02) 817-0011.)

SCA   The SCA is the simplest virus to deal with, as it's not actually DOING anything except hiding in memory, until you reboot. After 25 reboots it brings up a stupid message which raves on about The SCA. We just look at CoolCapture and fix it to get it out of RAM. Also if you hold down the Left Mouse Button while SCA boots the screen will go dull green, clear the CoolCapture vector and exit! It is called a trap door.

Two variations or should we say mutations also exist:
  i) LSD - same as SCA but different message
  ii) Zorro/Willow - ditto

Byte Bandit   The Byte Bandit virus takes the DoIO() vector and redirects it to itself. Thus, any attempt to read or write the boot block (i.e: AmigaDOS trying to figure out what kind of disk it is) results in the Byte Bandit writing itself onto that disk. This virus also has an interrupt that crashes the machine every five minutes or so after it's infected a few of your disks.

NB: Now this is a pseudo crash - if you hold down the bottom row of keys starting from left to right the screen will come alive and the virus will exit. It stays in memory not via the Capture vectors, but by a resident module and the Kick-TagPtr I've already described.

Revenge   Basically, a Byte Bandit clone except it will bring up an obscene pointer a few minutes after you reboot. It's much like the Byte Bandit in other respects.

Byte Warrior   Jumps right into 1.2 Kickstart's DoIO() address. Won't work under 1.3. Hangs around via resident struct, doesn't do any damage. If you look into memory at address $7fc000 you'll see a small message by the Bytewarrior!

North Star   Like SCA, hangs around via CoolCapture. Killing CoolCapture kills the North Star.

Obelisk   Softworks Crew - Hangs around via CoolCapture, also watches reads of DoIO() (but doesn't infect EVERY disk - only ones you boot off).

Pentagon Circle   This one looks at the DoIO vector, and has a CoolCapture vector. It will write itself over any virus inserted, but not onto anything else. (Neat idea!). No danger, easy to eliminate. Holding left button while booting with this one shows different screen colour, but doesn't get rid of it.

Lamer Exterminator   This one is a real problem maker. Yet another virus aimed at hurting people. In the world of hacking, a lamer is apparently the worst kind of pirate - one who doesn't crack software, doesn't write software, just collects names and addresses and collects and spreads software. Lamers don't do anybody any good - and the guy behind this Virus took it upon himself to make their

INTERLINK SOFTWARE

AMIGA

BUSINESS

BeckerText	199.00
Cygnes Ed	119.00
Data Retrieve	109.00
Data Retrieve Professional	299.00
Desktop Budget	95.00
Excellence!	389.00
Financial Cookbook	29.00
Fonts & Borders	49.00
Kind Words II	145.00
Microfiche Filer Plus	259.00
P.H.A.S.A.R. V3.0	129.00
PageStream	279.00
PageStream Fonts 1-5 (each)	59.00
Professional Page V1.2	545.00
Promise	69.00
Prowrite V2.0	179.00
Publisher Plus	139.00
Superbase Personal	95.00
Superbase Personal 2	189.00
Superbase Profesional V3.01	489.00
Superplan	199.00
The Accountant	379.00
The Works	199.00
Thinker (Idea's Processor)	89.00
Transcript	99.00
WordPerfect	499.00

GRAPHICS

Animagic (PAL)	145.00
Butcher II	55.00
Calligrapher	175.00
Comic Setter	149.00
Deluxe Paint III (PAL)	289.00
Deluxe Photolab	219.00
Deluxe Productions (NTSC)	219.00
Deluxe Video	169.00
Design 3D	149.00
Digi-View Gold	349.00
Express Paint Enhanced	199.00
Fantavision	89.00
Forms In Flight II	169.00
Gallery 3D	95.00
Graphics Studio	61.00
Homebuilder's CAD	259.00
Intro CAD V2.0	119.00
Lights Camera Action	98.00
Modeller 3D	129.00
Movie Setter	139.00
Page Render 3D	235.00
Photon Paint II	195.00
Photon Video Cell Animator	189.00
Pix Mate	95.00
Professional Draw	289.00
Sculpt 3D Design Disks (each)	49.00
Turbo Silver 3D	259.00
Turbo Silver Design Disks (each)	49.00
TV Show (PAL)	169.00
TV Text (PAL)	169.00
Video Titler	185.00
Videoscape 3D V2.0	254.00
Videoscape Design Disks (each)	49.00
X-CAD Designer	349.00
Zoetrope	169.00

LANGUAGES

AC/BASIC	289.00
AReXX V1.06	74.00
Assempro	159.00
Benchmark Modula-2	259.00
Benchmark Libraries (each)	135.00
DevPack V2.0	149.00

MUSIC

AMAS (Adv. MIDI Sampler)	219.00
C-Zar	389.00
Copyist Professional	359.00
Deluxe Music Construction Set	169.00
Dr T's KCS	359.00
Dr T's MIDI Recording Studio	99.00
Drum Studio	79.00
Dynamic Drums	109.00
Instant Music	49.00
Instant Music Sounds (each)	49.00
Pro Sound Designer	199.00

UTILITIES

Ami Alignment Kit	59.00
Amiga DOS Tool Box	95.00
Art Gallery 1 & 2 (each)	51.00
B.A.D. (Blitz Amiga's Disk)	75.00
CLI-Mate	64.00
Deluxe Help For Photon Paint	49.00
Deluxe Print II	169.00
Disk Mechanic	119.00
DOS-2-DOS	79.00
GOMF III With Button	115.00
FACC II	49.00
Fine Print	74.00
Flipside!	68.00
GP Term	95.00
Grabbit	59.00
Marauder II	69.00
Norgen (Geneology)	119.00
PrintMaster Plus	59.00
Project D	74.00
Quarterback	99.00
Raw Copy	89.00
Virus Infection Protection	69.00
Your Family Tree (Geneology)	79.00

EDUCATION

Adventures Of Sinbad	69.00
Aesop's Fables	69.00
Animal Kingdom	74.00
Arabian Nights	69.00
Con-Sound-Tration	59.00
Decimal Dungeon	69.00
Designasaurus	74.00
First Shapes	44.00
Fraction Action	69.00
Fun School 2 Disks 1-3 (each)	49.00
Intellitype	49.00
Kid Talk	44.00
Kinderama	69.00
Magical Myths	69.00
MasterType	59.00
Match-It	49.00
Math Talk	44.00
Math-A-Magician	49.00
Mavis Beacon Teaches Typing	79.00
Mixed Up Mother Goose	49.00
Read & Rhyme	69.00
Read-A-Rama	69.00
Spellbound	59.00
Speller Bee	44.00
Word Master	69.00

GAMES

3D Pool	49.00
4th & Inches	44.00
Adult Poker	39.00
Airborne Ranger	59.00
Alternate Reality - The City	54.00
Archipelagos	59.00
Autoduel	59.00
Baal	49.00
Balance Of Power 1990	69.00
Barbarian	59.00
Bard's Tale I/II (each)	49.00
Batman	59.00
Battle Chess	64.00
Battlehawks 1942	59.00
Battletech	59.00
Better Dead Than Alien	49.00
Beyond Zork	69.00
Bio Challenge	59.00
Black Cauldron	59.00
Bombuzal	59.00
Bridge Player 2000	59.00
Bridge V5.0	59.00
California Games	59.00
Captain Blood	61.00
Carrier Command	59.00
Centerfold Squares	49.00
Chess Mester 2000	49.00
Colossus Chess X	59.00
Corruption	59.00
Cosmic Pirate	59.00
Crazy Cars II	59.00
Custodian	49.00
Cybernoid II	44.00
Dark Castle	52.00
Deja Vu II	59.00
Demon's Winter	64.00
Denaris	49.00
DNA Warrior	49.00
Dragon's Lair	85.00
Dragon Ninja	59.00
Dream Zone	69.00
Driller	59.00
Dungeon Master	59.00
Dungeon Master Editor	32.00
Eliminator	49.00
Elite	59.00
Emerald Mine II	59.00
Emmanuelle	44.00
Empire	44.00
F16 Combat Pilot	59.00
F16 Falcon	54.00
F/A 18 Interceptor	49.00
Fire & Forget	59.00
Fire Brigade	49.00
Fish	59.00
Flight Simulator II	79.00
Flight Sim II Scenarios (each)	49.00
Flippit	39.00
F.O.F.T.	69.00
Football Manager II	49.00
Forgotten Worlds	59.00
Foundations Waste	59.00
Freedom	39.00
Galdregon's Domain	49.00
Gauntlet II	49.00
Gold Rush	59.00
Gunship	69.00
Hawkeye	49.00
Herbes Of The Lance	59.00
Hole-In-One	49.00
Hostages	59.00
Hotshot	39.00
Human Killing Machine	61.00
Hunt For Red October	49.00
Hybris	49.00
Ikari Warriors	49.00
Impossible Mission II	59.00
Incredible Shrinking Sphere	59.00
International Karate Plus	54.00
Iron Lord	59.00
Jet	79.00
Joan Of Arc	49.00
Journey	69.00
Journey To Centre Of Earth	49.00
Kick Off	49.00
King Of Chicago	69.00
Kingdoms Of England	69.00
King's Quest I/II/III (each)	44.00
King's Quest Hint Books (each)	18.50
Kristal	67.00
Lancelot	39.00
Leaderboard Birdie	59.00
Leatherneck	61.00
Legend Of The Sword	59.00
Leisure Suit Larry	54.00
Live 'N Let Die	49.00
Lombard RAC Rally	59.00
Manhatten Dealers	54.00
Manhunter	54.00
Mayday Squad	49.00
Mean 18	44.00
Menace	54.00
Mercenary Compendium	49.00
Millenium 2.2	59.00
Mission Con-Bat	69.00
Mortville Manor	39.00
Motor Massacre	49.00
Nebulus	49.00
Netherworld	49.00
Obliterator	69.00
One-On-One	29.00
Operation Wolf	44.00
Pacmania	49.00
Phantasm	49.00
Pioneer Plague	59.00
Police Quest	69.00
Populus	79.00
Prison	44.00
Purple Saturn Day	59.00
Q-Ball	49.00
Questron II	49.00
Raffles	49.00
Reach For The Stars	44.00
Real GhostBusters	59.00
Rebel Charge At Chickemauga	49.00
Ringside	49.00
Roadwar 2000	59.00
Roadwar Europa	59.00
Robocop	59.00
Running Man	59.00
Run The Gauntlet	59.00
S.D.I.	69.00
Sargon III	79.00
Sentinel	49.00
Sex Vixens From Space	59.00
Shadowgate	69.00
Shanghai	59.00
Sherlock	54.00
Shogun	69.00
Silkworm	49.00
Solitaire Royale	59.00
Space Harrier	49.00
Space Quest I	44.00
Space Quest II	64.00
Space Quest Hint Books (each)	18.50
Space Racer	44.00
Speed Ball	59.00
Spitting Image	44.00
Star Glider II	59.00
Star Ray	49.00
Star Wars	49.00
Strike Force Harrier	59.00
Super Hang-on	52.00
Superski	39.00
Sword Of Sodan	69.00
Technocop	49.00
Teenage Queen	49.00
Temples Of Apshal (Trilogy)	49.00
Test Drive II	64.00
Test Drive II Scenarios (each)	39.00
The Munsters	44.00
The Three Stooges	64.00
Thunderblade	59.00
Tiger Road	49.00
Time & Magik	49.00
Times Of Lore	59.00
Torch 2081	39.00
Turbo Cup	49.00
Turbo-Trax	61.00
TV Sports Football	69.00
Twilight Zone	59.00
Ultima IV - Quest Of The Avatar	59.00
UMS	64.00
UMS Scenarios (each)	32.00
Veteran	39.00
Vindicators	49.00
Virus	49.00
Voyager	59.00
Vyper	49.00
Wanderer 3D	49.00
War In Middle Earth	67.00
Wayne Gretzky Hockey	59.00
Who Framed Roger Rabbit	59.00
World Class Leaderboard	44.00
World Games	49.00
Zak McKracken	52.00
Zany Golf	49.00
Zork Zero	69.00

(and our) lives miserable.

Anyway, this virus loads into RAM into a different location every time. It is encrypted on the disk so you can't SEE the name of it, and it never actually SHOWS the name (but it's definitely there). It changes the encryption key used each time it is written back to disk. It has a counter and will wait until the machine has been reset two times or until three disks have been infected, and will then pick a DATA block (only a DATA block - FFS disks are safe, I guess), randomly, and will write the word 'LAMER!' all through it. This is obviously not good, and will cause random disk errors. This is the worst kind of havoc to wreak on the new user - and this virus is EVERY-WHERE! I've gotten it from five people in the last week alone (all from different countries! Anyway, something else I thought of about this virus: It introduces a NEW way for a Virus to stay in RAM. You see, if ExecBase is okay at reboot time (Exec keeps a checksum, among other things, and checks to see if anything has been corrupted quite carefully). Anyway, if Exec thinks ExecBase is okay, it doesn't bother rebuilding it.

So, this virus sets the SumKickData() vector to point at itself. Then at Reboot when this vector gets called after reset, the virus ReInstalls himself. At least this is what I think is happening. This virus sets up a Resident structure, but never sets the Match Word - either this means we don't need the MatchWord (a matchword is simply $4afc at the beginning of a resident structure; sort of like a signature telling the Amiga 'don't touch!!') or it means his SumKickData() is doing the recovery job - either way, it's new! three points for originality.

Graffiti   The first virus to come with rotating 3-d graphics. It's neat - you might want to trigger it (I'm not sure how) before erasing it. Anyway, this one just sets CoolCapture(), does something with DoIO() during the reboot but sets it back to normal before anybody gets to look at it. Lots of code is taken by the graphics stuff.

Old Northstar   Very poorly written. Not even worth mentioning what it does.

16 Bit Crew   Well, it seems to operate like the Graffiti Virus. No nice graphics to look at though! Oh well.

UltraFox   Written by UltraFox Australia. I don't know how it happens but after a certain event a silly message comes up on the screen much like SCA but different colors. Harmless really. (By the way Ultrafox, it's easy to trace a P.O. Box number - so watch out!)

DiskDokor   I spent more time on this one than on any other. See, this virus does lots of things. The first one for some reason was quite funny to me. What it did is, after having rebooted five times, each time you rebooted after that, the virus would eat 10K times the total number of reboots - so after rebooting 10 times, you would be short about 100K.

This virus also starts up another TASK. I'm not exactly sure when it happens, but another task named 'clipboard.device' will appear at a priority of -120, and will continually bash the Virus' vectors into the Coldcapture, Coolcapture, Warmcapture (which it sets to $ff000000 just to annoy), and the DoIO() vector. I didn't disassemble the entire thing, I didn't realize this until I wasted time looking for other things. This one also allocates some memory, copies some code out of Exec into this memory, and executes it. I never bothered to figure out why - Once it's detected, it's gone.

Turk Virus V1..2   This virus is the nastiest, deadliest, and cruelest virus ever written. It uses CoolCapture to stick around and DoIo() to monitor boot access. After five reboots at which it's written itself it will format half the disk and leave you weeping.

Also if during normal use it writes itself 10 times it will again format and crash. After Formatting it displays a message on the screen making it a dead cinch to detect but by then it's already too late!

IRQ   This is the FIRST Non-Bootblock Virus. That is the First File 'LEECH'. It copies itself from place to place via the first executable program found in your startup-sequence. It SetFunction's OldOpenLibrary(), has a KickTagPtr, and lives in the first hunk of an infected program. On an infected disk when the infected file is run the initial CLI window's title changes to "IRQ Virus V 41.0" making it easy to detect.

How do you get rid of a virus?

Getting rid of the virus is easy, provided you have a clean copy of your Workbench disk. If you don't, you will definitely need an Anti-Virus program. If you do, there is a simple procedure that will help in most instances. However, if your Workbench is infected and you follow this sequence, you may actually be helping the Virus to spread further!

1. If you know for sure that you have one of the viruses mentioned above then don't worry about it. But if you have any doubt whatsoever send a copy of the suspect disk to the *Australian Commodore and Amiga Review* office clearly marked with "VIRUS!". Send also a small description of the symptoms and where you got (or think you got) the virus from.

2. Turn the computer off for 15 seconds, then switch on and boot off a Workbench you're certain is clean (the original is usually fine).
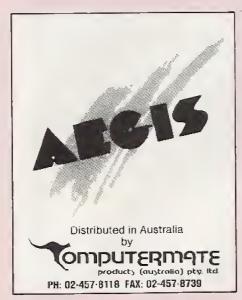
3. Copy the 'Install' command from the c directory to RAM: disk. 'CD' to RAM: . Now insert the suspect disk(s) into df0: and type:

1> Install df0:

After the drive light goes off for a while take the disk out and repeat for any other disks you have which do not have custom boot blocks and may have been infected. This will obliterate any virus from your disks which lives in the boot block.

If you see the characteristic IRQ virus message after booting then here's the procedure to get rid of it:

1. Turn the computer off for 15 seconds.

2. Boot with a clean Workbench

3. Look at the infected disk's startup-sequence.

4. Note the first file.

5. Delete that file from the disk.

6. Delete the DIR command from that disk.

7. Copy a fresh DIR to it and whatever else you deleted from the clean Workbench.

This procedure will work for most cases. After this, reboot with the disk and continue deleting and refreshing files executed in the startup-sequence until no more messages come up at reboot. Just remember to turn the Amiga off each time.

Sometimes when you're dealing with many disks and you suddenly get a symptom then you don't know which disk the virus came from.

The general rule is that you should Install any disks you have used which don't have a custom bootblock (ie. Commercial games).

The best solution!
Anti-Virus Programs

Our Anti-Virus disk contains a whole swag of different Anti-Virus programs. Here's how they work:-

1. By detecting and disabling the Virus in RAM.

2. Deleting the infected file/boot block. Optionally replacing the boot block with a small program which will stay in memory like a Virus, but act in such a way that virus strains are detected when you attempt to boot an infected disk.

Step one is essential, as unless the Virus is first disabled, it may actually turn your install command or equivalent into an install virus command!

Viewing a virus is simple using VIEWBOOT. Any disk which has lots of garbage in its boot-block and no sign of "dos.library" on the second line of the listing and you're in trouble. If you know the disk is not a custom boot block, you should definitely install it. Don't use VIEWBOOT though - it uses Dolo() and will only rewrite the virus! Carry out the procedure described above.

As a final point in extermination get yourself a copy of ACAR's Anti-Virus disk which is a great boon to all users of the Amiga. All current strains are described, and detectable. There are also several boot block protectors to help stop infection in the first place.

Who writes Virii?

Very talented, highly skilled programmers. Some are commercial authors, others are hackers, some are just small time hobbyists. Some virus strains have actually strayed from "test labs" - where programmers are testing possible future virus possibilities. A careless friend happens to copy an infected disk and accidentally a new virus is out.

What beats us here at *AC&AR* is why these people do it. Is it for fame? If so, this article was exactly what they wanted. If it was out of malice, then they should think again, sometimes hundreds of hours of valuable work goes down the tube with a virus infection. As programmers themselves, they would know only too well the agony of such a loss.

Whatever the reason, it is a shame these programmers don't put their talent to a more constructive use. Commodore Australia are currently hot on the trail of any local developers - why not give them a call if you have something to offer rather than wasting time on these frivolous, annoying and downright destructive virus programs. ❏

BRiWALL AUSTRALIA

Amiga Music Making

by Eric Holroyd

August last year, Eric touched on that mystical subject of MIDI music. In this issue, he continues his exploration of Amiga music with a guide to those packages readily available.

To avoid confusion I'll refer to an electronic keyboard simply as a synthesizer from hereon in,. so any reference to a keyboard should be taken to mean the Amiga's own keyboard.

If you read the previous article (August 88) you'll have some appreciation of what MIDI is and does. If you didn't you can probably still get back issues or reprints. But for new readers let me just explain that MIDI is an acronym for Musical Instrument Digital Interface which, in turn, means that the electronics industry has settled on a standard (hurray!) that all manufacturers of electronic equipment capable of making music will use.

This allows computers to "speak" to drum machines and synthesizers to get them to start and stop playing, also trigger various instrument sounds and voices etc. Some synthesizers have pressure-sensitive keys just like a normal piano so that the harder you press the keys the louder the sound produced. This sort of sensitivity information can also be sent to various instruments through the MIDI protocol.

The book to get to more thoroughly understand what MIDI is all about is *MIDI for Musicians* by Craig Anderton, who's also the editor of the USA magazine *Electronic Musician* - a great mag if you can get it. The book is available from most good booksellers, and the better music shops handle it too. I got my copy at Venue Music in Druitt Street, Sydney. It's an invaluable MIDI tutorial and reference book.

As most Amiga users know, the computer is capable of playing music in four voices over a range of about eight octaves. Using a MIDI music program and inter-face you can connect your Amiga to a synthesizer and the range is expanded to 16 channels for voices. Music written on the Amiga using a synthesizer will be played back through the synthesizer's own voices rather than the computer's voices.

That's the big difference between music programs that don't use MIDI and those that do. To further confuse the issue for you, some programs allow you to compose and enter Amiga music either way and in this article I'll be looking at several of them here to tell you how I found them and what some of their various features are.

Computer Music

● Computer-generated music is becoming widely used in many areas, both in recorded music and live performance. The background music for the popular TV series Miami Vice was done mainly on computers, and I know of several musicians who work in their home studios with computers and synthesizers to make the sound tracks for TV and radio commercials, and backing tracks for sale to singers who work as a solo act to taped accompaniment.

I've seen some huge sound and light shows with computer-generated music, one of the biggest being the one commissioned by the city fathers of Houston, Texas to commemorate their centenary recently. This was a gigantic production of epic proportions in which Jean-Michel Jarre projected laser images onto Houston's skyscrapers, all the while playing some wonderful music on his synthesizers and computers.

Closer to our own computing inter-ests would be the guys who write music and sound tracks for computer games such as Ed Bogas, Rob Hubbard, and the UK's ubiquitous Ratt. These guys really know what they're doing and their work is heard by computer users all over the world.

There's always room for new tunes and it's a tough area to break into but, if you have some natural talent and one of the excellent software packages now available, in the words of Fats Waller "One never knows, do one?"

There's a big commercial market then for computer-generated music, so as well as being an interesting hobby to satisfy the soul you can make money at it too if you're good enough to keep up with the professionals who have already moved into the area.

Music making is not just the province of the professionals either, there are many fine amateur bands and orchestras all over Australia who all play from written or printed music. Some of the music software outlined here can help produce music for those kinds of outfits to play too. There's some very high technology available for computer users now and you can get some great results once you start to learn and use it!

In the meantime, here's an explanation of the meanings of some of the terms used.

Sequencers

● A sequencer is a device (either hardware or software) that digitally records and plays back a set of programmed instructions (MIDI information) to a programmable musical instrument such as a synthesizer or drum machine.

There are several sequencer systems/ programs available for Amiga and with one of these and a MIDI interface (which you need anyway to plug in your synthesizer to the Amiga) you can record and store all the musical sequences you wish. Most of the professional level sequencers are not concerned with creating or editing instrument sounds as that's not their function.

Quantize

● The more professional music programs have this feature and what it does is "tidy up" a section of music which doesn't "add up" properly. Each bar (or measure) of music must have a total value according to the time signature which you set at the start of the music and quantizing makes sure that your music code adds up to this value.

It's very useful if you've recorded music in real time direct from your synth and have fumble-fingered a passage. Quantize (think of it as "auto-correction") would tidy up that passage and make it sound better.

Real Time or Step Time

● **Real time** means "played exactly as it was input" which is the same as what happens when you record yourself playing into a tape recorder. It's pretty hard to play music perfectly on a computer and synthesizer setup unless you're a highly skilled pianist, but many musicians can and do use this real time method and quantize their inputted music later as it's

a quick and easy way to record computer music.

Step time means simply that you enter your music step by step, ie a note at a time in manual mode, either by mouse or with keyboard strokes. Many people find that this is a quick way to do it anyway and it can be almost as quick as a typist doing a letter once you get used to the keystrokes required for the various jobs.

I know a musician in New York who works with an IBM clone doing orchestral arrangements which he prints on paper when he's done the job and he told me that he prefers keyboard input to synthesizer input as he finds it quicker. I don't know the IBM programs of course, but the principle is the same. The fact that you can "cut and paste" bits of music as you do text in a word processor makes step time useful too, and not nearly as laborious as you might have thought at first.

Sampling

● This is a system widely used to "capture the flavor" of a sound then use it as a musical voice. What happens is

that a sound is recorded and its characteristics translated into all the various frequencies used in the range of musical notes. Low notes have low frequencies, high notes high frequencies.

There are many libraries of sampled instruments available for use as instruments with Amiga music programs and there are some stunningly realistic sounds. Some synthesizers have a sampling feature with an in-built microphone and storage system which lets you record and save your choice of sounds to build your own library. One such library available commercially is a set which I reviewed for this magazine called `Life Cycles'.

This has a large library of Strings, Brass and Woodwinds for Classical music and Lead, Backing and Percussion instruments for Pop music. It's compatible with *DMCS* and *Pro MIDI Studio* and I got my copy for $49.95 from ComputerMate Products.

OK then, here's the way I saw the various music software packages I was able to get hold of. They're not in any particular order of personal preference. ❏

Music-X

This is a professional-level music sequencer from the Micro Illusions company which allows almost any function to be controlled by "keyboard mapping".

This simply means that you can define keys on your Amiga's keyboard to perform certain musical tasks, sort of musical macros.

There's full MIDI support of synthesizers, foot pedals, drum machines etc. The program uses your synthesizer's own

instruments and is concerned entirely with the processing of music tracks in a variety of ways. It doesn't let you define instruments or change waveforms as that's not its function. Real-time recording and quantizing (the auto-correction which I've mentioned elsewhere) as well as step-time input works well.

Music-X has 250 tracks available which gives you a great deal of flexibility. This allows a lot of different uses such as, say, a dozen or so drum tracks. When the song is chained together as a sequence you can try each drum track with the music to see (hear?) how it sounds before finally settling on the particular drum sound track that you'll use. Multi-

ply this out with bass & guitar lines, brass and sax sounds, vocal backing sounds etc and you'll see the possibilities.

The *Music-X* sequencer screen is set out like a tape recorder with Play, Record, Pause, Stop buttons etc to be operated by mouse clicks. On the play screen there's a display of the Keyboard Map which lets you play any or all of the tracks or voices. In this mode you can start playback and bring in each instrument as the track plays to experiment with sounds and check that it's all working OK. Just as when working with a multi-track tape recorder you may "drop in" a new section of music or re-do an existing one by going straight to the suspect spot and re-recording the notes you don't like.

I'd mentioned this "Punch In, Punch Out feature" elsewhere and it's very useful for repairing or otherwise editing just uses a mouse click to set an entry point in your text, *Music-X* lets you have four "Cue Points" anywhere in a piece of music. Once set, a mouse click takes you there, a great time saver when looking for the start of a particular passage.

Editing

● There are several editing features worth noting, firstly the Event Editor which lets you list all the MIDI events in a piece and scroll slowly through them to add, alter, delete or whatever. Notes play as you scroll too. The percentage of quantization can be set here, with note start/end/duration parameters all specifiable.

The Bar Editor is a graphic representation of blue and white columns, a bit like a musical bar chart, which isn't easy to explain but which works well once you see it in action.

The Keymap Editor lets you "split" your synth's keyboard so that different keys send MIDI messages to different things. Useful for having the lower end of the synth send to a bass on one channel and the higher keys sending to a piano on channel two. This idea is widely used in live performances where we see musicians working with several MIDI instruments mounted on racks on stage. Recording studios use it a lot too.

There's a Librarian feature which is configurable, and which composers can use to teach the system to communicate with any MIDI instrument such as a drum machine, synthesizer, sequencer etc, or even multiples of each type.

MIDI equipment in a band or recording studio can become very complicated, with a mess of leads all over the place to connect the various bits and pieces together. *Music-X* solves this by including a 16 x 16 patchbay to allow you to direct "this goes with that" and the percentage of effect your various MIDI devices have on each other.

This short review was done from a pre-release version of *Music-X* as the distributor hadn't received the shipment at the time of writing. By the time this goes to press the full version should be available here (it went on sale in the UK last Christmas). It looks like it's a good, fully professional music sequencer with many fine features and I'd like to be able to do a full in depth review later. ❏

RRP Amiga $309.95 .
Review copy from OziSoft
02) 211-1266.

Dr T's Keyboard-Controlled Sequencer

The keyboard doing the controlling in this case is your synthesizer and this software lets you get the best out of it.

Dr T's Keyboard-Controlled Sequencer is getting deservedly high acclaim from many professional musicians who are working with it on various computers. I looked at version 1.6A (for Amiga) which has been adapted so that it handles multi-tasking and other features of the wonderful Amiga.

It's a monster musical toolbox which is concerned purely with the recording, sequencing and processing of music tracks. You don't define instruments with *KCS*, instead the program uses all the sounds built into your synthesizer, and anyway there are many other programs available for defining (and saving) new instruments and sounds. There are three main sections of *KCS*: Track Mode, Open Mode, and Song Mode.

Track Mode

● Track Mode can be likened to a 48-track tape recorder, 36 tracks are visible with a further 12 available. There are the familiar tape recorder controls at the bottom of the screen for Record, Play, Stop, & Start whilst alongside are the Function Controls for Live Edit, Punch In/Punch Out, Muting, Soloing, Quantize, Cue etc etc.

You can do a fantastic amount of very accurate editing and recording here and there are activity displays which flash in time and show you when tracks actually contain data. This acts like a linear sequencer, meaning that musical information is spread out in a long line, just like recording tape on a reel. All of the tracks can be looped to play and repeat as many times as you like.

By the way, Punch In, Punch Out is the term given to an editing function whereby you play your track up to the point where you want to either add or redo a section on one of the tracks. You then play, or key in, the new bit and it's inserted at the Punch In point.

A Mute New Tracks feature lets you record multiple takes of the same material without stopping playing. Each track will mute (turn its sound off) when finished and the next track starts to record. Great when you're hot with a musical idea and want to keep on playing it to choose the best "take" later. All tracks may be merged. punched in or out, recorded, erased, swapped or named by simple keystrokes or mouse commands.

Editing a recorded track is easy, with F1 or a mouse-click taking you to the Track Edit screen. All the data for a single track is shown there as a long list of MIDI "events". Each event is listed by time, location, note, velocity, duration and MIDI channel. Changes are simply typed in with a press of the Return key shifting all following events by a corresponding amount. If you wish to adjust the following event only press enter, so that the rest of the track is kept in its original place.

You'll need to learn the difference between the functions of the Enter and Return keys (usually doing the same job in most programs but markedly different in *KCS*) to be completely on top of this aspect of the editing system.

All the usual edit features such as Cut, Copy, & Paste are there, plus Delete and

Would you rather keep pace?

Or keep ahead.

The reviews of the Amiga 2000 have been overwhelming in their praise.

Rightly so.

Its major features are tailored to keep you a jump ahead of the business pack.

The premier feature is undoubtedly multitasking. This lets you run virtually unlimited programs simultaneously.

Documents, presentations and the like are quicker to prepare and more impressive in their appearance.

Full colour graphics – 4096 colour shades – boost your impact, on screen and on paper.

Amiga's internal expansion ability shows all concerned that you make sensible investments.

Future additions are accommodated within the system easily and economically. More power and greater capability.

Should you need to be MS-DOS compatible, perhaps for working at home, Amiga is capable of running both Operating Systems. A very simple expansion.

65,000 Amigas have been sold in Australia. 850,000 Amigas worldwide.

Accordingly, the software collection for Amiga is as diverse as it is numerous.

Titles like WordPerfect, Professional Page, MaxiPlan, KindWords and Superbase.

A strong business and graphics package for building a stronger business. More are being added.

This is a computer with a career.

Having read this far, you're obviously interested in keeping ahead.

So, as an introduction to Amiga's possibilities, your Commodore dealer will give you the software you need to begin powering ahead.

Smart business people are guiding their future with Amiga.

AMIGA 2000 from Commodore
S M A R T E R .

FOR FURTHER INFORMATION SEE YOUR LOCAL DEALERSHIP

Erase. They sound the same but they're not! Delete does what you think it'll do, but Erase leaves all of the data following the data you just removed exactly where it was. This lets you rewrite a section easier, I reckon. Other Edit features are Find, Adjust, Insert, Undo, & Backup.

There's a handy Calculator utility which lets you work in time steps, such as calculating the number of steps between two musical points. Using this you may also Correct the time of the current step to that in the second measure/step by adding the calculated time to the current time. This lets you enter a new event location by its measure and step directly in the CALC window without having to go to the TIME setting. Very useful and yet another of those computer-related things that takes an age to explain but only a second to demonstrate if you're sitting in front of the computer.

MAP will bring up a very complete list of everything that's in memory! All tracks, sequences and songs, as well as names, comments and lengths in meas-

ures and events also including the status of all the tracks. This one is very useful! TEXT brings up a text storage area of 16 lines by 68 characters where you can write yourself little notes about a piece. Even better, pressing P after the map is

displayed sends the entire map and text to the printer for a hard copy. Clicking the PRINT button will send a copy of the current track or sequence direct to a printer so that you may study your music code that way.

In *KCS* you may choose Step Time Recording or Real Time Recording from Track Edit mode. In the first one, notes are entered from a MIDI synthesizer and placed into whichever channel you've specified. Note values, duration, velocity level etc are selected from a list on the screen with Rests and Ties being put in by Function Keys or mouse clicks. You may hear your new track alone, or in context with other tracks.

Real Time Recording lets you play the synthesizer and record what you play exactly as if you were playing into a tape recorder. This is where you'll use Quantize to tidy up any fumbled notes and you have the facility to Overdub in KCS too. I liked the way this worked, with the Overdub sequence automatically matched to that of the sequence you're overdubbing to. Another Real Time Recording method here is Record with Cue whereby you can start the existing

sequence at any measure and simply add to it. Useful if you have a partly completed piece which you need to finish off.

Song Mode

● Sequences are the very basis of both Song and Open Modes. A sequence may have any number of tracks, or any type of data recognised by *KCS*, and it recognises just about anything to do with the MIDI language'. Song Mode is simply a list of sequences arranged in your nominated order but which can't overlap (pretty much like a drum machine). The list just plays straight through `as is' although you can have loops within the sequence and do many musical tricks such as transposition, tempo and volume changes and even delays.

I found Song Mode to be great for experimenting and quickly putting together a piece of music from sequences recorded in track mode. I used Step Time for faster pieces as I'm not really a piano player (my main instrument is trumpet) although I recorded some slower pieces in Real Time and quantized them to clean up my playing mistakes. What a boon to be able to work both ways! Incidentally, I found KCS to have absolutely rock-steady timing, a feature that's so important to good music-making.

Open Mode

● I'd mentioned Track Mode above as being a linear-based sequencer, and now here's Open Mode which is more of a modular or phrase-based sequencer (or more literally a cross between the two).

Phrase-based means that small modules of music are recorded and then chained together, or looped, to form whole pieces. This, in fact, applies to more traditional methods of writing music where verses are quite often the same musical phrase repeating with different words. It's also quite similar to the way

drum machines are programmed.

In Open Mode you may use combinations of both types of sequencing and it will take quite a deal of practice to become fully conversant with this mode as, by it's very name and nature its wide open to let you do just about anything. There's a quite similar editing system in Open Mode to that of Track Mode with just a few subtle differences.

In the Play/Record facility in Open Mode there are 128 sequences available which can be called at any time. They can be stopped, started, muted and un-muted and at the same time you can be recording more sequences along with those ones. You can probably imagine how useful this would be if you wanted to write a great long piece with a short repeating

riff figure playing along. The possibilities are endless and you may have up to 16 separate songs in memory at any one time too.

Professional musicians who make written arrangements may do all the arranging on *KCS* and hear that it all plays properly before exporting it as a stream file to *Dr T's Copyist Professional* for printing out. This is something that pros have been dreaming about for years and it's finally here.

There's a great deal more that I could say about *KCS* as it is a simply huge program with a great deal of complexity and yet it retains a lot flexibility. It's been around on Atari ST and Macintosh for quite some time (in fact I think it first appeared on the Commodore C-64) and so

comes to Amiga virtually bug-free. I certainly couldn't crash it and have never been visited by the omnipresent GURU when running *KCS* so it seems pretty fool-proof.

Like all good software, its creators are constantly working on more features and owner registration cards should therefore be returned so as to be kept informed of any upgrades. For a working musician who wants a highly professional program to let him/her produce the highest possible quality Amiga-generated music I think that *KCS* would have to be the ant's pants.

RRP Amiga $359.
Review copy from
ComputerMate Products (02)457-8118.

C-Zar

This is a sounds editor created specifically for the Casio CZ series of synthesizers: CZ-1, CZ-101, and CZ-1000.

As there are three different units covered I thought an explanation of what they are would be in order. So...

A multi-voice synthesizer can generate several notes at the same time and is said to be polyphonic. A single-voice synthesizer can only make one note at a time and is therefore monophonic. Both types can make hundreds of different sounds for those notes to be played as. A

synthesizer capable of playing more than one sound at a time is said to be multi-timbral.

The CZ-101 and CZ-1000 are monophonic in multi-timbral mode and act as anything up to four monophonic synthesizers, thus producing four notes at once in different sounds.

CZ-1 is polyphonic in multi-timbral mode and can play up to eight notes at once, again each in a different sound.

The *C-ZAR* software lets you edit, create and store on disk or RAM cartridge an infinite variety of sounds. The manual quotes a data disk as being capable of holding up to 6000 sounds and you may have up to 160 of these in memory at any one time on a 512K Amiga. Sounds saved to RAM cartridge will overwrite existing sounds, also sounds may not be saved to a ROM cartridge. Both of these devices should be available from good music shops or Casio dealers.

Sound Library

● There's a great library of over 200 sounds (instruments) already on the program disk and I spent a whole day just playing tunes using sounds such as Space Synths, Martians, Whistles (very human-sounding!), Racing Cars etc., as well as a whole range of more legitimate instrument sounds such as Church Organ, Harpsichord, Classic Guitar, Oboe etc. On top of all that there was Funky Guitar, Electric Bass, Sexy Sax, Fender Rhodes Piano etc.

There was a Piano sound too that sounded exactly like a real piano. This is

apparently very hard to produce and when shopping for a synthesizer with built in sounds I'd been advised a long time ago to check out the Piano sound. If they've got this one right the rest of the sounds must be OK I was told.

There are facilities in *C-ZAR* for changing all aspects of a sound's waveform and "envelopes" can be copied between sounds (singly or in groups), or even duplicated within a sound itself. Once created, sounds may be organized into Banks which may be shuttled between disks and RAM cartridges. The cartridge is a boon to live performers as it means that all your favourite sounds can be stored, for instant recall, on a device that'll fit into your shirt pocket.

With the synthesizer working through the MIDI interface (I use the Music Master one) and with *C-ZAR* up and running I had access to 10 banks of 16 sounds each. These are loaded to memory from a large menu on screen and you make selections by mouse. The synthesizer plays in your chosen instrument and if you have the output through an external amplifier the results are great.

Other *C-ZAR* features for sound manipulation include: Transpose, Vibrato, Pitch Bend, Portamento, Detuning, Modulation etc and it's all done in colour graphics which makes it very easy to use.

This program is not a dedicated sequencer as such, it's a sound editor as I said. It's very useful for stage and/or recording studio work as the sounds produced are quite fantastic. For home music making and recording (as I do with a

ghettoblaster which has an in-built tape deck) you simply press your deck's record button and go for it. There is a facility to record a short sequence which you can then loop to use as a repeating "bed track" to play as a "riff" or rhythmic figure over which you can play your main track. I got some great effects by using this Auto-Play facility.

The single disk is non copy-protected, which means that C-ZAR can be installed on a hard drive easily, and there's a very comprehensive 70-page manual which covers every aspect I could think of (and some that I didn't!).

Another useful thing is that C-ZAR is completely compatible with the Amiga multi-tasking feature which means that you can use it to edit a Sound or Instrument whilst it's actually in use via another program. This opens up a whole new area there too.

CZ-1000

● I was working with a borrowed CZ-1000 synthesizer. This wasn't loaned by Casio themselves I hasten to add. I'd tried previously to get to use their equipment

for software review and general information to readers purposes. They did once lend me a very basic kiddy-winkie unit for a couple of days which was more than the Roland Corporation could do anyway (although they did give me a lot of phone help), whilst Yamaha said the best they could do was let me cart all my computer gear and software over to their warehouse where I could "play around for an afternoon"!

Not much use for an in-depth look at computer music I'm afraid so I borrowed the aforesaid CZ-1000 from a friend and

got stuck in. It's a good unit and performs very well. If you own any one of these three Casio synths you'd enjoy the new horizons that this software opens up for it. There are some great bargains to be had in the *Trading Post* if you're looking for a synth too.

I found C-ZAR to be a very useful, very professional Sound Editor and I highly recommend it to Casio owners. ❑

RRP Amiga $389.00.
Our review copy came from
ComputerMate (02)457-8118.

M

The "M" is for music and this program takes a much different approach to the other programs I've looked at in the way music is put together on the Amiga.

M is fully professional music software and supports the use of a MIDI keyboard, also allowing full use of the Amiga's own sound system if you prefer (or if you don't have a MIDI synthesizer). If you don't use a synthesizer there's a good range of high-quality instruments on the second disk (it's a two-disk set) with a nice selection of Strings, Percussion, Wind, Eastern (Sitars, Tablas and Tambours!), as well as Synths and something called Weird Instruments.

It's not copy-protected in the usual sense, so it can be installed on a hard disk. It does however, require you to enter a word from the manual in order to complete the loading of the program. The makers of M (Intelligent Computer Music Systems, USA) say that they decided on this form of copy-protection so as to allow users to make unlimited backups, hard disk installation, and full use of accelerator cards with no problems. The manual says that if you want to get a copy of M which is not copy-protected, they'll sell you one for US$50.

Personally, I find this type of protection a nuisance, but I suppose that piracy being what it is the software producers feel they must have some form of protection on their investment of time and expertise etc so enter a word is probably desirable over something that makes your drive do tricks.

Grids

● This one doesn't use a grand staff, or music code, instead it uses a series of grids on which your notes appear as graphic representations when entered either in Step Time or direct from the MIDI synthesizer. There are several different kinds of recording and you may choose to enter Single Notes or Chords, all of which will show up straightaway on the Editing Grid as inputted.

Another mode of Recording is the Drum Machine Mode where you have really precise control over the rhythms to be played and the way they're to sound too. Select Rhythm, Legato or Accent to get good drum sounds and, like most music software, once you've defined a particular sequence of drums and other percussion sounds you can set it to play in a repeating loop. Alternatively you can have it play through a couple of times, switch to another set of drum sounds, back to the first lot, and switch again as many times as you like.

All the music software I've looked at has its own language and vocabulary of words used as commands etc. For instance, once a screenful of musical data has been defined, and you're happy with the way it sounds, you may take a Snapshot of it which you then use as a macro (this means that you issue a single command to perform a whole range of predefined functions). I like the idea of this as it allows short phrases which occur frequently within a piece of music to be Snapshotted and called up whenever that phrase needs to be played again. This is a sort of automated performance of your own creations.

Manual

● The manual deserves a mention as I found it to be a good example of what I think a software instruction book should be. It starts off very simply (great for people like me) and has a Let's Jump Right In section for those too impatient to read through the whole thing first, or you may work through a series of tutorials to learn in easy stages what M is capable of. The book is ring-bound to lie flat on the desk. It uses large type and has lots of graphics to tie in with what you're clicking on and off on screen and is generally a very useful manual.

As I said, M uses a graphic approach to entering music into a Pattern, and little boxes known as Numericals contain a letter, number or graphic which may be toggled with the mouse to show a greater or lesser value, or maybe to step through a series. For example, tempo may be shown as a number and you set the tempo of a Range of your music (like ranging a sentence or paragraph in a word processor) by clicking at the start of the range then dragging to where you want that tempo to end.

Your inputted music is an "Orchestration" and if you're working with a synth you have sixteen MIDI channels to work with. These are selected by mouse clicks, as is "Enable Record". I found all this to be quite easy to work with, once I'd read the manual through a couple of times. I usually do it this way, once to get the gist of it and the second time to understand it a little better. Of course, to really understand the finer points I'd need to read up on each part as I'm working with it and I'm sure that most computer users are somewhat similar.

Another word-meaning unique to M is "Player". This is what they call a full list of all the commands in a musical composition. Other programs may talk about Tracks, Sequences and Segments whilst M refers to Players, Programs and Patterns. It all makes sense when you're sitting down in front of your Amiga with the program running and the manual open, so don't worry too much about the different terminology. Up to four Players are allowed at any one time.

Main screen

● M's main screen, where you do nearly all of your work, is composed of seven Areas, all visible at the one time. They are:

Patterns Area, with four rows of controls for managing/creating the four available Patterns (a Pattern is a collection of notes).

Control Area, with global controls that affect the operation of everything within the entire program. All controls are displayed as a kind of `barchart` illustrating what values you've determined, so it's easy to see at a glance what'll happen to things like Volume and Tempo when you play the music.

Sound Area, where you select sounds for the Amiga or send patch (instrument) numbers to your MIDI synthesizer.

Cyclic Variables Area, where you define Rhythms, in a Legato (smooth) style, or Staccato (accented) style for the Drum Machine Mode I mentioned above.

Variables Area is where you manipulate the Patterns for each of the Players you'll set up. Commands for Transposition, Texture, Note ordering/density are included here, as is the ability to set MIDI velocity ranges and direct the output from the Players to different MIDI channels.

Conductor Area lets you conduct

changes in the way your music plays. In other words, you're in charge and it's in this area where you say what you want to happen.

Snapshot Area is where you save the macros mentioned above.

On the second disk, along with all the instrument sounds, is a Public Domain program known as RGS. This is a Real-time Graphical Synth which lets you paint a "Sonogram" or series of notes in a particular sound. It's very handy for making IFF samples to use as Instruments in *M* or in other music software that uses the IFF file format. It's complete with documentation and is a real bonus.

The entire *M* program is inter-active, with you working from either the Amiga keyboard or a MIDI synthesizer plus the mouse with keyboard shortcuts. There's much use of pull-down menus with a large array of selections covering just about everything I could think of.

Due to time limitations (I got this one for review very close to press time) I wasn't able to run it for an extended period and so get the best from it, but I liked very much what I saw and heard. Definitely worth further investigation. ❑

RRP Amiga $2790.00.
Review from ComputerMate
(02)457-8118.

DeluxeMusic Construction Set

This was the very first music program I saw on the Amiga, and it is of course part of the Deluxe series published by Electronic Arts.

Other programs in the suite include *DeluxePaint, DeluxePrint II, DeluxeVideo,* and *DeluxePhotoLab* - most of which allow files produced with one program to be used within another. All of them are handled in Australia by this distributor.

DMCS is a complete program in itself and makes very good music using a range of instruments from its own included library which can be used in any or all of the four Amiga voices. Its screen display is that of the grand staff which is the name given to the two sets of five-lined music linked together to signify the

Right and Left Hands for piano music or more properly as Treble and Bass Clef.

Entering Music

● On this screen you enter music by use of the mouse and keyboard shortcuts, with a good range of dynamics (make it play louder and softer etc) and tempo (make it play faster or slower) effects. There are pull-down menus for every con-

ceivable function: Load instruments; Set Tempo; Loading and Saving Music Scores; Changing Play Styles; Load Fonts; Enter Lyrics: and much more. The ability to change Play Style is quite something, you can choose to have your piece played staccato, which is a clipped kind of sound, or legato which is a very smooth, flowing style. All the styles in between those two opposites are selectable and some really nice effects are possible.

If the music you're working on has sections repeated at a later point in the piece then you don't have to write it in all over again. There's a cut and paste feature very similar to that used in word processing which lets you copy a section to anywhere else in the composition that you may care to have it. Very handy, and a great time saver.

Space above and below the grand staff is user-definable and you have the option to leave yourself enough room to put words above the music if it's a song you're working on. These lyrics can be accurately positioned so that you read the words exactly as the music plays. Used in conjunction with Flash Notes, which means that the notes on screen light up as they play, this can be a great aid to teaching someone else to sing the words of a song you've written.

Also, there's a special *DMCS* font which lets you put guitar cifra or tablature, which are both names for those tiny fingerboard charts showing finger positioning for a guitar chord right on your music too.

Having done all this, and heard your music play (either through the Amiga's own speakers, or better still, through an external player - I have mine hooked up

to a ghetto-blaster), you can then print out the music on your printer with your choice of margins so that when you punch the paper to fit it into a binder you don't spoil the music. A nice touch, and one to illustrate the thought that's gone into the making of this program.

MIDI

● So far, all I've said about *DMCS* has been relative to the making of music using the keyboard and the software's own instruments and voices. Now I'll get onto MIDI and *DMCS* certainly supports this to the tune of (I didn't intend a pun there but it seems to fit) 16 MIDI channels and up to 128 presets. This last bit is what instruments are called in MIDI terminology with the presets on a synthesizer being known by numbers.

DMCS doesn't let you enter your music in real time from the synthesizer although it does allow input via MIDI from the synth rather than the keyboard. Synthesizers vary in specification (usually according to the price paid for them, just like anything else) and a basic synth might have only four voices and 32 presets.

If you don't yet own a musical keyboard this is the kind of info you need to be armed with to go shopping. Get the highest specification you can afford, you're sure to need those extra bits later on even if you don't feel you need them right away. The thing is, you can use different MIDI presets and channels at different points in any piece of music and with a bit of practice you'll soon be using every feature available to make really good music with a lot of tone colour

achieved by changing instruments or presets and voices or channels.

DMCS really comes into its own when used as a (highly efficient) tool for editing and otherwise changing or tidying up the output of another music program, such as any sequencer that saves and reads files in the SMUS-IFF (Simple Music Interchange File Format) form. Then of course, you have the printout option with *DMCS* which (generally) sequencers don't have and you can see already that it's a very useful program.

In my previous article I'd said that I viewed music software in two different categories: Home Hobbyist and Professional. I would call *DMCS* a Hobbyist program (and a very good one) which is capable of producing more than enough music in various instrument sounds for the kind of musician who, a decade ago, would have been performing on the parlour piano or electronic organ. The facility is now available here for home music-making with a big difference, and that is the ability to store that music on disk for repeat performances at any time.

Of course, that same music piece can be edited, have instruments or voices changed, have the tempo changed to make it play at a different speed, or even transpose it (make it play in a higher or lower key). This last bit is very important if the piece is the accompaniment to a song which was originally done for a male singer and a female now wants to do it. The range of the human voice differs greatly between male and female so transposition of such accompaniment is a must. In written orchestral parts this means at least a week's work for a professional copyist to rewrite the whole thing by hand, whereas a computer with software such as this can transpose almost instantly and then it's a simple matter to do another printout.
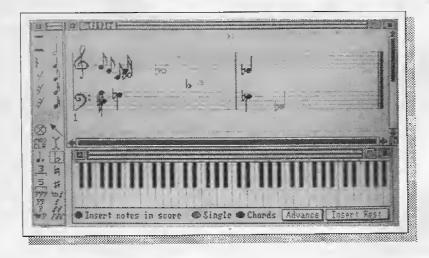
Once again, this is for the home user or hobby musician wanting a good quality easy-to-use music program with which to to enter, edit, play or print their own music. ❑

Sonix

Another very good program in the home hobbyist category, this one is widely used in Europe by the hackers who do those great demos with fancy graphics and scrolling messages.

I know from correspondence and other sources that they use either this or a purpose-built program known as the *Ultimate Soundtracker*, which I've seen but didn't find as easy to use as *Sonix*.

It's by Aegis Developments and again is part of a suite of programs such as *Aegis Animator, Audio Master II, Lights! Camera! Action!, Modeller 3D, VideoScape 3D* and many other programs for producing sound, graphics and animation, usually with a facility to interface with each other. Many of these programs have already been reviewed in *Australian Commodore and Amiga Review* and the full Aegis range is now available from this distributor.

Manual

● *Sonix* comes very nicely packaged and has a data disk of songs etc in addition to the non copy-protected program disk and a beautifully organised manual (which unfortunately isn't spiral bound to lie flat on the desk, a particular niggle of mine). This kicks off with an introduction to what the program is capable of and goes on to give a full tutorial on the theory of music to which I give full marks. It's

excellent and includesā a self-test of questions and answers at various stages for you to check your accumulated knowledge. Sort of "harmony home-work"!

A section then follows telling how to make a backup copy of the program disk to work from, also how to install *Sonix* on a hard disk if you're lucky enough to have one. Then there's a quick tour of the screens to get you started and from there on you're right into the program proper. You're shown how to enter your music on the grand staff, how to play the key-board display and how to play back the scores that you've written.

Here you have full control over Volume, Tuning and Tempo with a series of on-screen sliders, just like the controls on a recording studio console. Grab them with the mouse pointer and slide them up and down to get the sound you want. All very nice and easy.

Scores may be transposed up or down and there's a good editing feature to add, move, copy or otherwise manipulate sections of your music. For instance, if a section already written in the early part of the song is to be repeated later you just "paste in" a copy of that section where you want it with the mouse pointer.

The facilities are all there for you to design and save your own instruments, with the waveform characteristics shown on screen, and you can hear instantly how your new instrument sounds. If you don't like it, just keep experimenting till you get it how you want it, then save it to your data disk for later use in one of your compositions. You can also change the existing instrument sounds and re-save the new sound under a different name without affecting the original sound, which of course is still there for use any time.

Sound and instruments

● Sounds and instruments stored on the *Sonix* disk are digital samples and include: Saxophones; Drums; Electric Rock Guitar, all of which are somewhat difficult to synthesize but which sound very realistic in this collection. There's also a selection of IFF instrument files which are synthesized instruments stored in that file format. Both types of sound and instrument are fully supported by *Sonix*.

There are two volumes of *Sonix Soundtrax* available with more music and sounds available for around $39.95 each and, whilst not necessary to run the master program, they do complement it by performing music tracks produced with the software.

One of this program's very strong points is its ability to hear music played using sampled sounds and instruments. It also uses the IFF file standard for compatibility with other software by other manufacturers. *DeluxeMusic Construction Set* uses IFF files also but it doesn't allow you to modify an instrument by changing its Low Frequency Oscillation and waveform as does *Sonix*.

So, if you own both programs and want to hear a piece of *DMCS* music with a different combination of edited sounds you can just load it into *Sonix* and play it. There's a chapter devoted to this which states compatibility with *SoundScape, Music Studio* and *Instant Music* scores and instruments too.

Tracks

● *Sonix* separates music into tracks which are simply lines of music, each playing one note at a time. There are four track buttons which can be clicked on or off so that you may have all four tracks playing at once (and therefore hear all the Amiga's four voices) or you can click just a single track on to check it out. I like to build up my compositions a track at a time and add each one to the playback to make sure it sounds OK. You can even have tracks playing at half volume to make the track you're currently working on stand out.

Eight tracks in two groups of four are supported and the first four may be directed to the stereo audio output of your system to give a pretty good stereo effect. All eight tracks are accessible via your MIDI interface too and 32 MIDI patches or sounds may be used over 16 channels. Mark Riley, the creator of *Sonix*, explains beautifully what Channels, Patches, Factors, Offsets etc are in the MIDI section of the manual and it's quite easy to work it all out when sitting at your Amiga with the synthesizer hooked up. Sequencing of MIDI generated scores is quite easy and, once again, the manual covers it very well with good working examples of what to do.
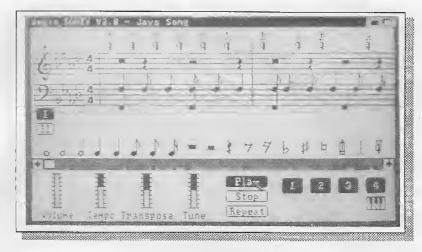
In "keyboard mode" you get a graphic representation of the Amiga's keyboard and you may define each key to play any note you wish. The instrument to be played can also be loaded from a menu on this screen, also all MIDI parameters are controlled from here too.

Waveforms

● Attack; Decay; Sustain; Release; are the names of the various attributes of a sound's waveform and this program helps you to learn the concepts of programming these parameters by simply moving the slider controls up and down. Listening to the effect produced and noting the various readings helped me to understand ADSR (as it's referred to) more fully.

On the instruments screen you get a display that looks like a synthesizer's control panel and its a simple matter to redesign a sound's waveform by redrawing it's display with the mouse. Most of the common sound synthesis control methods are supported in *Sonix* including amplitude and filter controls to adjust the frequency and volume range.

A double set of four sliders control the rates and levels used by the envelope (this is the name given to the set of parameters which produce given sound) generator and you may also set the speed, sync and delay of the Low Frequency Oscillator. The sliding sound effect known as "portamento" is provided too. All the musical characters such as sharps, flats and naturals are supported as are all rests and notes up to "sixteenths" or semi-

quavers. Key and time signatures are put into place with the mouse pointer then you simply point and click to place your music on the grand staff.

Music entry with *Sonix* is in Step Time only. MIDI recording (or Real Time entry) is not currently supported but Aegis say in the manual that if there's sufficient user demand for it then it will be implemented in a future upgrade. Registered users of course, are always kept informed of such upgrades.

Finally, having created your musical score and heard it played back to your satisfaction you may want to have a printout of it to store or pass around or even submit to a song publisher with the hope that you may have written the next chart topper. Sonix will print your scores on any printer that's included in your Amiga's Preferences menu.

You can get three grand staffs per

page and if it looks like there's going to be a break in a measure then it'll automatically move that measure down to the next staff. It'll put a title at the top of each page too, along with the page number and the name of the score.

This is a very good program indeed for the home musician who wants to create high-quality computer music either with or without a MIDI synthesizer. There's a wealth of good sounds and effects built in and the manual tutorials alone make it a worthwhile buy. Best of all, you don't have to be a musical genius to use it. □

The Music Studio

An early Amiga version of this program by Activision was reviewed by Andrew Farrell in GEM magazine Volume 1 Number 3, with a further write-up in the 1988 Special edition of Australian Commodore and Amiga Review.

I've played around with v1.2 myself for quite a long time and produced a variety of music tracks by entering music (in Step Time only) with the mouse. There's an in-built selection of fifteen sounds which you can edit and save to create

your own library of sounds and some really nice effects are possible. The notes scroll across the screen as the music plays and there's good use of the Amiga's colour palette by showing the notes of different tracks and instruments in different colours.
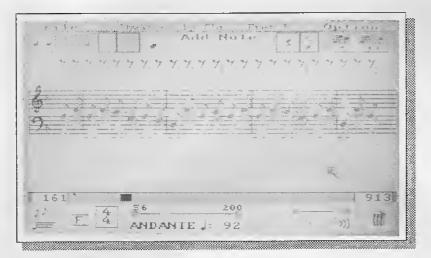
Triplets and transposing are handled very well, along with the easier musical functions. Cut and paste editing, a full range of notes, sharps, flats, rests, and naturals are there to be picked up and located on the grand staff by the mouse and for those who don't want to be bothered with musical theory there's even a "Paint with Music" feature where you roll the

notes around with the mouse and the computer ensures that the relationship between each note is good enough for the music you're "creating" to sound OK.

Lyrics may be placed on your music and will scroll past along with the tune so songsmiths have been catered for also. MIDI instructions refer specifically to the Casio CZ-101 synth but music recording from the synthesizer wasn't supported for Amiga in v1.2. It was for the Atari ST (oh how those dual purpose instruction manuals annoy me!) as the instructions kept referring to that machine.

Nevertheless, I could play the synthesizer along with the software and made

some nice live music which I recorded on the tape deck of the ghettoblaster to which my Amiga's output is always directed. Very handy, that hookup! I have a tape in there at all times and if I hear a new game soundtrack that I like I simply record it (for home consumption only, between consenting adults!) and have quite a collection now.

There's a pretty good explanation of musical theory in the *Music Studio* manual along with a tutorial on Attack, Decay, Sustain, Release. Even though this is more of a "home hobbyist" musical program it's still pretty comprehensive and represents very good value for those just starting out in computer music.

A hardcopy printout is available of your *Music Studio* song if you have an Epson compatible printer capable of graphics. Again, it's not professional studio-quality printed music but it's more than adequate for the home musician or music student.

Version 2.0 is now available and adds more than 15 new features to the original, also providing new, re-digitised instruments. You also get full MIDI device compatibility and direct MIDI input is now built in (Real Time Recording) to help with rapid note and chord placement.

Other new features include: Change tempo, key signature and volume at any point in your music; Change note stem direction; Play multiple songs; Merge songs together; Insert Bars; Change duration of notes for all those specified of a duration. A "Jukebox" type of player is also included in this new version.

Good value all round for new Amiga musicians and those wanting to get started painlessly.   ❑

RRP Amiga $61.95.
Review copy from OziSoft (02)211-1266.

Conclusions

Well, that's about it. That's how I saw that selection of programs and I'm sure there's enough info there to help you get the right software for your particular music application.

I'm glad that such a range of high quality programs has at last become reality on the Amiga. It took quite a bit longer for the really professional software to appear on our machine than it did for the Atari, mainly because the Amiga is so much harder for the programmers to write for. That turns out to be a benefit for us all though as, now that the programmers have got on top of it, we get a lot

more features in our version of a given software package than do versions for the other machines. This is due to the Amiga's multi-tasking capabilities, better graphics etc and it was certainly worth the wait to get the right stuff.

Much of the "Professional" music software is aimed at people who actually produce finished music, either on recording tape or printed sheet for others to play. Without the same model of synthesizer hooked up as the one on which the music was composed, there's little point in one of your friends running a disk with your stuff on. That's not what the

professional software is about. If that's the kind of thing you want to do (and that's nice anyway!) then use one of the programs that uses the Amiga's own voices to play the software's built-in instruments.

Music is fun to compose and play and this little lot all makes it that much easier to do on your computer, so have a good read with all of this and make your selection of software to do it with, I'll bet you'll have as much fun then as I do with Amiga music-making. Enjoy!   ❑

Program of the Year competition

Every year, from here on in, we will be holding a "program concept of the year contest". All those brilliant minds out there without the time to program can put their ideas to paper in the hope someone else might take up the concept.

This year's entries didn't exactly inspire confidence in our readers. The quality was impressive, however the quantity was at an all time low. Nevertheless, we managed to narrow down the field to four entries.

We wish to thank all those that went to the truble to participate. Designing the concept for a program is only the first step in a long chain of processes to produce the end product.

Grand Prize - BMX Bike plus One Year Subscription to Australian Commodore Review.

Wayne Baulch, age 18 - Orbostoria.

"Recently I went for my learner's permit, and it struck me that a car/motorcycle simulation aimed at helping people learn the road law as well as having fun would be a great idea . . . "

Wayne went on to describe the program in detail. The idea included having a test at the end of the game, and also a section demonstrating the effects of drink driving. Well, we love the idea, Wayne. You're the winner. It's practical, entertaining and it could save lives.

Commendations - Free selection of Firebird software:

Mark Healy, age 15
Ipswich, Queensland.
Excellent presentation.

James Dalton, age 17
Valley View, South Australia.
Practical achievment.

V Heeney - Corryong, Victoria.
Practical and original!

128 Corner

Geos 128 Version 2

by Harry Waterworth

Berkeley Softworks have finally released their up-grade of GEOS Version 2.0 for the 128, and the big question is, was it worth the wait?

The answer is a definite yes, both on the quality of the program and on a value for dollar basis.

New features

It's hard to know where to start here as there are so many new features that have been bundled into the package. Programs like *geoMerge* and *geoSpell* which used to be sold as separate products are now included in the basic package. Additional features have been added to the operation of the desktop and there is now support for two disk drives plus the ram expander for all of the *Geos* power users. There are also more printer drivers added so buyers should he no difficulty in finding a printer driver to use with their printer.

Desktop

We will start off by having a look at changes that have been made to the desktop. It is now possible to do multiple file operations instead of having to deal with one file at time. For instance, if you wish to transfer say, six files from your work disk into your ram expander, it is simply a matter of holding down the Commodore key, clicking on the six files required (which then change to reverse video), then clicking on any one of the chosen files. A multi-file 'ghost' icon then appears and you click on this, drag it over to the ram expander disk icon on the right hand side of the screen, click again and the files are transferred to the ram expander (or a second disk drive if that is how you have your set-up configured).

There is also a similar option available in the menu functions on the top of screen. By clicking on the 'select' option, you can then select from one of three options; 'all pages'; 'page files' and 'border files'. For instance, if you click on 'page files', all of the files on the page currently on screen will go into reverse video, and you can transfer these to your expander or second disk drive using the method described above. Another good feature is that you can now transfer eight files to the desktop border instead of the four files that you used to be restricted to. The desktop clock has also been changed so that now, whenever you have the desktop on screen, the time and date are shown in the top right hand section. I recommend that you set the time and date each time you boot up *Geos*. This will ensure that your files will be 'stamped' correctly whenever you use them.

Geopaint

GeoPaint has also been considerably up-graded, and we will have a look at some of the new features that have now been made available in Version 2.0. Firstly, it is now possible to create ellipses well as circles by use of the 'constrain' option. If you use 'constrain', as the word implies, it will constrain the image to a circle. However, if you de-select constrain, you can then create ellipses to whatever size and shape you desire. The same feature works with squares and rectangles.

Another excellent new feature is the ability to be able to move the pointer pixel by pixel using the cursor keys. It enables accurate placing of the pointer with a minimum of fuss, and is especially handy when you are doing house plans or electrical layouts etc. Berkeleys have also transferred the image scaling device from *geoPublish* to this new version of *geoPaint*. You can now copy an image on screen using the edit box and clicking on copy or cut. This places the image into a photo scrap file, then it is simply a matter of defining a new area (any size you like within the current window you are working in), selecting the edit menu and then clicking on paste. The image is pasted into the new region, and you then have the choice

of placing it centrally in this region; scaling it to fit, or stretching and scaling the image to fit into the new region.

As well as being able to re-scale your drawings, the new edit box in Version 2 allows you to make a couple of other changes. The image can be made transparent so that you can superimpose it over other images to create great special effects. Also, you can select one of 32 patterns and your image will be redrawn using the chosen pattern (which is displayed in the box as you cycle through the patterns to make your selection). These additional features give a great deal more power and flexibility to the *GeoPaint* program.

GeoPaint now also has a user selectable grid to assist with those larger drawings that will require more than one window to complete the work. The only drawback to this feature is that when you turn the grid off at the end of your work, data underneath the grid lines is also erased. The best method is to erase the grid manually in each section as you finish the work in that area. Berkeleys also supply you with a transparent acetate grid to place over the drawing or plan you wish to copy. Then, when you turn on the grid on the screen, you simply draw the whole picture square by square, using both of the grids as your measuring guide.

Geowrite

For those users of the previous version of *GEOS 128* who did not buy *Writers Workshop*, all the additional enhanced features for the word processing side of the package that were found in *Writers Workshop* now come standard in *GEOS 128 Version 2*. Features such as headers; footers; text formatting; search and replace; decimal tabs; centre, right and full justification; superscript and subscript; single, one and a half and double spacing and so the list goes on. To be quite honest, I would doubt that any serious writer could have used *geoWrite 128* without the features of *Writers Workshop 128* that now come standard in this new version.

Also included with *GEOS 128 Version 2* is the ability to format your document by either full page or individual paragraphs; print options for either high quality, draft or near letter quality modes (provided your printer supports these features), and putting the page number, time and/or date into the header or footer. In addition you also have the capacity to import graphics or text from other *GEOS* programs such as *geoPaint*, *geoCalc* and *geoFile* etc. All in all, it comes up to what you would expect from a professional style word processing programme.

Geospell

As if the above features weren't enough, Berkeley have also bundled *geoSpell* into this new package. *GeoSpell* was another program that used to be sold separately, but now, not only is it included at no extra cost, it also runs much quicker than it used to.

Using the Expander, *geoSpell* checked a document of 1500 words plus (about 2 and 1/3 pages) in just under a minute, not bad by anyone's standards. Not only is *geoSpell* easy to use, but like all other good spell checkers, it allows you to build up your own personal dictionary. So Aunt Anzillito or Uncle Rhiandofile need only be entered once into your personal dictionary and their names will never be queried again (at least not by *geoSpell*).

GeoSpell also allows you to search for a word either from the main dictionary or your own personal dictionary, and switching from one to the other is done simply by one click of the mouse. When *geoSpell* queries a word, you have the option of accepting the word in that instance; accepting it in all instances; replacing the word in that instance or replacing it in all instances within the current document. The option of accepting a word in all instances is a handy feature as it stops the word being queried throughout the entire document.

The *geoSpell* dictionary contains approximately 40,000 words and you can add about 10,000 words to your own dictionary. This should be more than enough to meet the need of the bulk of the 'would be' authors out there in computerland.

Geomerge

GeoMerge is another of those programs that used be sold separately, (with *geoDex*) but is now included in the basic package of *GEOS Version 2.0*. For those newcomers to computing and/or *GEOS*; as the name implies, *geoMerge* is a program that allows you to send out multiple copies of a single document any number of individuals or companies.

The program is simple to use, but yet is quite powerful. It allows you to use 'IF' and 'ELSE' statements to tailor the program to suit your individual requirements. Differing words or groups of words which may or may not be required within the form letter being produced may be controlled by use of the 'if' and 'else' statements.

Other features

GEOS Version 2.0 also includes a text grabber to allow you to import text from other programs such as *Easyscript*, *Paperclip* and *Wordwriter* etc. An application called "Paint Drivers" is also included which is one of the more under-rated features of *GEOS*. This program allows you to convert *geoWrite* documents to *geoPaint* documents. The big advantage here is that once the one version is completed, you can add art work to any place in the document that you choose. In addition to that, if your *geoWrite* document contained numerous fonts, once it has been converted to a *geoPaint* document, the font programs don't have to be on the disk in order to print out your document.

Paint Drivers also allows you to overlay pages to create some great special effects. It is the sort of application that you can spend hours with; have a great deal of fun in using it, and in the meantime, get some excellent rewards for your efforts.

Summary

All in all, *GEOS Version 2* is an excellent program, and well worth the money spent in up-grading to obtain the extra benefits and features. It now remains to be seen if Berkeley's customer support section can match the quality of their programming department. I won't hold my breath waiting. ❑

Writing Wedges

by David Williams

How many machine language utilities do you have that require a bunch of SYS codes to use all the features? Maybe you've written some. A much neater and more professional way is to use a wedge.

A what? Well, one of the ways that BASIC interprets your programs or commands is through a routine called CHRGET (CHaracteR GET). This picks up single bytes from the program, and is called by many routines in the operating system of your 64.

Those of you familiar with the DOS 5.1 program may know that this modifies CHRGET to trigger its commands. Or, put another way, it diverts CHRGET to itself, by wedging into it. Hence, the name Wedge. A copy of CHRGET is held in the operating system, and is copied into zero page during the initialisation procedure on power up or reset. Every time the computer wants a character it calls this routine, which when disassembled looks as follows:

```
$0073  e6 7a     inc   $7a
$0075  d0 02     bne   $0079
$0077  e6 7b     inc   $7b
$0079  ad ?? ??  lda   $???? this num-
                       ber changes -
                       see below.
$007c  c9 3a     cmp   #$3a
$007e  b0 0a     bcs   $008a
$0080  c9 20     cmp   #$20
$0082  f0 ef     beq   $0073
$0084  38        sec
$0085  e9 30     sbc   #$30
$0087  38        sec
$0088  e9 d0     sbc   #$d0
$008a  60        rts
```

Now, what this does is actually quite straightforward. Every time CHRGET is called it increases the location from where it gets its information ($???? in the listing). This is done by incrementing the low byte in location $007a. Then in $0075 the computer checks to see whether the page has been crossed, that is, from $ff to $00.

If it has, then the high byte in location $007b is also incremented. $007a and $007b come stright after the LDA command, making CHRGET what is known as a self-modifying program. At this point the information is taken from this memory location, and put into the accumulator.

Bytes $007c to $007f check to see if the character is a numeral. If it is greater than ASCII numeral 9 ($39) the routine is left through $008a with the carry set. This is explained later. Next is a test to see if a space ($20) was picked up. If so, the routine is called again. This is why spaces are not needed between keywords in Commodore BASIC programs.

Bytes $0084 to $0089 successively subtract two numbers from the original byte, and end up with the same number. There is a method in this madness, as two flags are set in the status register that are helpful later. These are the car-

ry flag and the zero flag.If the carry flag is clear on exit then the byte is a numeral in ASCII form. If it is set, however, then the byte is something else.

The reason for this is that when subtracting two numbers in machine language, the carry flag must always be set first (the command SEC means SEt Carry). If the number that we are subtracting from is the larger of the two then the carry flag will remain set. If the number being subtracted is the larger, then the flag will be cleared.

Any byte that has a higher ASCII value than the numeral 9 has already been eliminated, at byte $007e. $30 (ASCII for zero) is then subtracted from the accumulator in preparation for setting the final flags that can be used for testing for numbers. The carry flag is set again in the next instruction, so at this point it is unimportant.

Bytes with ASCII values lower than numerals now range from $d0 to $ff. With the next subtraction, the original value is restored. As numerals are the only ones lower than $d0 (the number subtracted) they will be the only ones to clear the carry flag. The zero flag, however, could be set in two instances. First where our byte was tested against $3a (ASCII for a colon). If it was a colon, then the zero flag would have been set as it was equal.

Secondly, after the second subtraction if the original byte was zero (not ASCII digit zero). In that case, after the first subtraction the accumulator would hold $d0, and subtracting the same value would set the zero flag.

A colon in a BASIC line signifies the end of a statement, and a zero, the end of a line, and therefore an end of statement also. Thus, by checking the zero flag it is possible to tell if we have reached the end of that particular instruction. Keyword routines are entered immediately upon exit from CHRGET. The computer may, however, need the accumulator for some other reason first. How do we get the byte back?

Well, by using the CHRGOT routine. If, instead of entering the routine at $0073, we enter at $0079, the instructions to update the pointer are skipped, and

so the original byte is taken again. Say we want some routines actioned on the up arrow character, '^'.

A routine for automatic line numbering, and another to renumber a program, for example. The commands for these could be '^a', and '^r' respectively, and the routines could be in the block of free memory, $c000-$cfff.The first thing to do is to wedge into the CHRGET routine. We want it to jump to our routine after it has collected a byte, but before it starts manipulating it. The alteration would therefore be at $007c. Our first instructions would look like this:

```
$c000  a2 02     ldx     #$02
$c002  bd 00 c0  lda     $c00a,x
$c005  95 7c     sta     $7c,x
$c007  ca        dex
$c008  10 f8     bpl     $c002
$c009  60        rts
$c00a  4c 0d c0  jmp     $c00d
$c00d  Our coding will start here
```

What all that does is to store JMP $C00D at location $007c, through a decreasing loop with the x register. It is called by SYS 49152 from BASIC. The beginning of CHRGET will now look like this:

```
$0073  e6 7a     inc     $7a
$0075  d0 02     bne     $0079
$0077  e6 7b     inc     $7b
$0079  ad ?? ??  lda     $????
$007c  4c 0d c0  jmp     $c00d
```

Now each time CHRGET is called it will update the pointer and go to $c00d. As our commands all start with an up arrow that is the first thing to check.

```
$c00d  c9 5e     cmp     #$5e
$c00f  f0 03     beq     $c014
```

If the byte is ASCII $5e, the up arrow, we can branch to do further checks, but if not we continue with the next bit of code. What we have to do here is revert to the normal state of things. We don't want to change CHRGET back, as we want to use it again, so we use the CHRGET in ROM, and BASIC will continue as if nothing happened.

```
$c011 4c ab e3 jmp s$e3ab
```

Now to check the next character for an A or an R. This we do without updating the CHRGET pointer, in case it isn't, and we have to hand control back to BASIC or whatever. To do this, all the registers are preserved on the stack. Then the accumulator is loaded with the value of the next byte using indirect indexed technique. A check is made to see if it is an A or an R. If so, we branch off to their respective routines. If the byte was not what we wanted all the registers are restored from the stack (notice in the reverse order that they were put on), and we jump to the ROM.

```
$c014  08        php
$c015  48        pha
$c016  98        tya
$c017  48        pha
$c018  8a        txa
$c019  48        pha
$c01a  a0 01     ldy     # $01
$c01c  b1 7a     lda     ($7a),y
$c01e  c9 41     cmp     # $41
$c020  f0 ??     beq - to auto line num-
                     bering routine
$c022  c9 52     cmp     # $52
$c024  f0 ??     beq - to renumber rou-
                     tine
$c026  68        pla
$c027  a a       tax
$c028  68        pla
$c029  a8        tay
$c02a  68        pla
$c02b  28        plp
$c02c  4c ab e3  jmp     $e3ab
```

When the routines have finished executing, they should remove the registers from the stack like from $c026 to $c02b. Although they are not needed, as your routines are called the stack becomes fuller and fuller, eventually giving an 'OUT OF MEMORY' error.

Wedges can be quite easy to write, and also quite useful. For instance, how about one that enables you to turn the high-resolution screen on or off with just a couple of key presses. The rest is up to you!   ❑

Adventurer's Realm

by Michael Spiteri

Howdy adventurers, welcome to the Realm, Australia's only column dedicated to informing and helping troubled adventurers, wargamers and roleplayers.

Adventurer's Realm – 3 Years, and Still Going Strong!

● You can't afford to miss next month's issue of A.C.A.R, because the Realm will be celebrating three years of helping adventurers out of trouble spots. We'll be looking back at the last three years, at all the great adventure games that have appeared, at all the great debates and at some of the weird and wonderful characters that have written to the Realm. To top it off, we'll give a nice swag of hints and tips to keep the party rolling. Don't miss it! ❏

Realm's Mailing Dept

● If you are stuck in any strategy game, or can give help, or if you just want to comment on adventure games then write to the Realm.

Always enclose a stamped addressed envelope if you expect a reply. One is a must if you want one of the Realm's free hint sheets (only available from 1/10 Rhoden Ct). ❏

For adventure & wargames:
Adventurer's Realm
1/10 Rhoden Court
North Dandenong
Vic 3175

For role-playing games:
Realm's Dungeon
44 Hawkesbury Drive
Willeton
WA 6155

Free hint sheets

The following free hint sheets are available:

● Bards Tale 1,2,3
● Zork 1,2,3
● Hitchhikers Guide
● Hampstead
● Hobbit
● Castle of Terror
● NeverEnding Story 1
● Adventureland
● Borrowed Time
● Faery Tale
● The Pawn
● Pirate Adventure
● DejaVu
● Dracula 1,2,3

Only four hint sheets per person !

Scary Mutant Space Aliens From Mars (SMSAFM)

● *SMSAFM* is the latest adventure game from American company Readysoft. The game starts at your home on Earth, and apparently takes you around the universe exploring planets and facing all kinds of weird looking aliens.

The game is a text adventure with cartoon style graphics that burst with colour and sometimes animation. Digitized sound effects give the game a creepy feeling, making sure it lives up to its title. The randomly generated aliens you come across are ugly looking critters, well drawn and animated.

However, the glossy features of this game do not cover up its drawbacks such as the very weak vocabulary, which has quite a limited range of words. The other thing which didn't really win my love was the text descriptions that try to be funny using Monty Python type humor, but dont quite succeed. *Hitchhiker's Guide to the Galaxy* has nothing to worry about.

Still, the game is quite a novelty, and although it didn't tickle my funny bone, it might yours. You can enter full sentences on the command line, or you can use the mouse to point to icons on the screen.

How is the plot? Well, the aim of the game is to dismantle the aliens' Ion Beam Doomsday Device that is threatening Earth. I got as far as exploring the house and the spaceship but just could not leave Earth. Then the constant switching of disks (two drives is a must!!) drove me bonkers and I gave up.

Nice graphics, some digitized, some animated. Good sound effects and good use of colours might impress you, and you might be patient enough to fight with the vocabulary and parser. If you are, then you'll like this game, which is aimed at a younger market. The least you can do is try it out before you decide to buy it.

Oh, I forgot to mention, you get two real cardboard aliens free in the package. Ho hum. ❏

Produced by Readysoft Inc.
Distributed by Questor
(02) 662 7944.
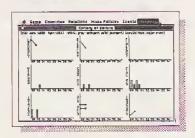RRP Amiga $.

Balance of Power - The 1990 Edition

alance of Power is not a new game, released several years ago on the Apple Macintosh, it set new standards for political strategy games.

Well, now the game has been re-released on the Amiga. This time all the information in the game has been updated to present day, which makes the game more realistic as you tackle today's problems - and boy, there are quite a few problems!

Basically, you play the the role of the American President, and your goal is to increase the geopolitical prestige of your nation, and decrease the geo prestige of

the Soviet Union. This is done by winning the love of the countries that count the most and minimising those who wish to remain your enemy. Phew! Heavy stuff.

I just have to print this quote from the introductory pages of the manual...

"How do you get a country to like you? There are two ways: you can do nice things for it in an effort to convince it to like you, or you can wipe the bastards out."

A map on the screen shows the President (don't back out now!) what countries do like you and which ones don't. So you can start using things like foreign policies to change the face of the world. Aid the Govenmentt, aid the Rebels, give economic aid, give military aid - it's all done by the push of a mouse button, but push carefully, or you might cause a nuclear war.

The media keeps you in touch with whats happening and what good (or damage) you have caused. You can keep tab on the Russians, or you can get advice from any country you wish. You'll be flooded with statistics on almost everything you need to know about to help you on your merry way.

I really cannot do justice by reviewing this game in such a short space, but you don't need me to tell you it's a great game! It's won heaps of awards which it so deserves. It's incredible the amount of information stored in this game, and I would never question its accuracy.

I must note that it is aimed at an adult market (no, there are no nudie pictures), and if you read up on politics you can really go to town on this game. There are many levels of play, ranging from the simple USA VS SOVIET not-so-complex level, that introduces the player to the mechanics of the product, through to the expert level that gets you dealing with

Finlandization as you think hard and tread carefully in winning the power of frightened countries. Even heavier stuff!!

For those of you who are already familiar with *Balance of Power*, this new edition boasts many new features. Eighty countries are now included, in a game that now covers the years 1989 to 1997. Processing time is much faster, and a 4-person on screen crisis advisory group has also been set up. It also includes both one and two player games.

Balance of Power is a sophisticated political strategy came with realism that does hit close to home in its own way. If you've ever thought you could have done a better job that Ronnie, then now is your chance. If things don't turn out as you had planned, you can always start from scratch.

A very detailed manual will show you the ropes and give you enough advice to really get you going. The cost of game is nothing compared to the amount of time and research put into its creation.

Good graphics and good playability (total control!) makes this product another winner in Realm's good book - and it will run on your standard Amiga 500 !

Balance of Power: The 1990 Edition by Chris Crawford and Mindscape Software. Review copy from YPA software.

Problems, problems, and more problems.
(The Troubled Adventurers Dept)

● Dot the Granny from Shepparton writes to the Realm with problems in *Search for the Golden Eggcup* (?). The ferryman is pushing for some money, but Dot cannot find any! Then in *The Helm*, how does she get into the castle of past the Griffin (and what are the stones or mirror for!) Getting past bulls and dogs is also a problem for Dot, in the game *Imagination*.

Ron McCorkill of Karrinyup in W.A is stuck in *Colossal Caves*. He's reached 128 points, but the pirate keeps taking his treasure. Also, is there anything useful in the second maze?

Mr J Serrio of Kingston in Qld is stuck in *Rigel's Revenge*. He wants to get out of the net and into a tank. Any takers?

David Couche of St Agnes would like to get in contact with anybody who knows how to finish *Thermonuclearwargames*. David is still stuck in the final location - the war room.

Simon Rawlings is still stuck in *African Safari*. He has found the signs, but they seem to contradict themselves. Could the person who helped him out last time give him some more advice?

Uninvited is giving Christine Sullivan of Black Rock, Victoria some real headaches. The dogs rear their ugly heads once more!!

David Lear of Flagstaff Hill, SA, has spent the last few months collecting problems to drown the Realm in. First in *Subsunk*, how does he open the safe? Then in *Kayleth*, where are the seeds that need to be planted in the compost, and is it possible to go further down the Southerly corridor? What use is the indent in the dome in the Mind Facsimile section? Finally, in *NeverEndingStory*, how does Dave get the key out of the room full of rats?

In *Legend of the Sword*, what is the password to enter the sphere, and how do you get out of the well? These are the problems currently troubling N.J. Donaldson.

Uninvited once again invites itself into the Realm. Ange Orsini of Mildura wants to know where most of the keys that open all those doors are hidden.

Veteran adventurer Maree Reynolds of Thornbury in Victoria is stuck in a number of games. First up is *African Safari*, how does she stay on the boat, and how does she get the frog in the witches' cauldron to pull his act together and do some things? Then in *King Solomon's Mines* she can't get past the second anthill. In *Golden Baton* she can't get the baton from the water. In *Lords of Time* she can't get the Red Porsche. Finally, in *Raka-Tua Volcano*, what are the stones used for and where can she find the shovel and matches? Er, try playing one game at a time, Maree.

Joel Williams is stuck in *Kings Quest I*. How does he get past the Granite Boulder, also how does he use the slingshot? Finally, what is the Gnome's name?

Finally, I'm stuck in *Mortville Manor*. What do I do in the well? ❑

Adventure Chit-Chat

● It seems a few members of the help team don't seem to agree with me giving *Mortville Manor* 100 out of 100 in the June Issue. Kerrie Brady said she would have given the game slightly less because sometimes the speech is hard to understand no matter how many times you hear it. Kamikaze Andy said he would

have given it a 85 out of 100. Not even a game such a *Journey* deserves such a high score. Finally, David Couche noticed that the MicroComputer Spot mega page advert in this magazine described *Mortville Manor* as simply a "Boring Adventure". I agree with you David, they are obviously not adventurers! I'll stick to my opinion, because the game is just not getting the coverage it deserves!

The Beaver has a few interesting points to make about current adventure games. She found the *President is Missing* cassette version to be totally unplayable, and would like to know if anybody else has come to this conclusion. She also writes that official clue sheets are available from the UK from the suppliers of *Time and Magick*, and it is worth the trouble to send away for them! ❑

Help, Help and more Help
(The Smart Adventurers Dept.)

● Thanks to everybody who went to the trouble of sending in tips for all those troubled souls. If your problem appeared in the Realm a few months back, it might just reappear here - with a solution!!

● For: Mathew Harpel
Game: Jewels of Darkness
From: George Aranda
Help: To stop getting killed by the sandworm you must type wait, and it will slowly go away.

● For: Beth Herring
Game: Drak
From: Simon Rawlings and Maree Reynolds

Help: To get the crowbar, type get bar. The woman in chains stays where she is.

● For: Dumpy
Game: Legacy of the Ancients
From: Ron Collumbine
Help: Use the stone key to open the closed door. The museum window gives access to the Pirates Lair. Once on the island, go to town and buy a boat and sail west. To get more coins, just keep buying and selling!!

● For: Mathew Hampel
Game: Lords of Time
From: A.Stivala

Help: Give the looking glass to the narcissus, who will give you something useful in return. Two short planks and a coil of rope must be used to bridge the stream.

● For: David
Game: Quest for the Holy Grail
From: Dot the Granny
Help: You need the baseball glove to get into the castle, also a wedge. He has to go in and down to get the shrubbery for the Knight who says nic.

● For: Carey Hulme
Game: The Hobbit
From: A.Stivala & David Dymock
Help: The commands to escape from the Dungeon are - talk to Thorin, say 'open window', say 'carry me' say 'go through

window'. You can substitute Gandalf for Thorin if you wish. You might have to repeat yourself a few times with Gandalf. Once out of the Dungeon, go north, down, east, and east.

● For: Severia
Game: Space Quest II
From: Stephen Burrows

Help: You need a light to scare the cave beaver away. Dive in a deep spot in the swamp after taking a big breath. You will find a glowing gem.

● For: Craig Wright
Game: Thermonuclearwargames
From: David Couche

Help: In the service station, look racks. Get pipes and go to the fence. Join the pipes (command - join pipes). Then jump.

● For: Grant Scott
Game: Shadowgate
From: James Rumph

Help: The skeleton key in the book opens the small door in the first room. The torch that kills the wraith is the one with rings around it, found in the second corridor, near candles.

● For: David Maish
Game: Shadowgate
From: James Rumph

Help: A fire-proof cloak can be found where the wraith first appears.

The Dungeon (Realms Role-Playing-Dept)
By Kamikaze Andy

● SSI has released *Demon's Winter*, a fantasy RPG for both the Amiga and C64. *Pool of Radiance*, the first in the Advanced D&D series will soon be available for the Amiga, while the sequel *Azure Bonds* will be released for the C64 at the end of the year.

The success of Dungeon Master has seen the rise of many clones, the first being Pandora's *Galdregon's Domain*. Another fantasy RPG in the *Dungeon Master* mould is *Bloodwych* from Imageworks. Both are British efforts and should be on the shelves soon.

Interplay has announced yet another fantasy RPG *Dragon Wars*, which supports characters from its *Bards Tale* series, and is based on the Champions board game.

Dragon Wars will be released on the 64 first, with the Amiga version to follow.

Finally, Origin plans to release four RPG's by Christmas, and one of those releases could be *Ultima VI* !! According to Origin's head honcho - Lord British, *Ultima IV* should be finished by October, and plans a speedy release for the latest installment in the *Ultima saga*. Also note that Origin has just announced the Amiga release of *Ultima V*, probably the best computer RPG thus far. ❑

Dungeon Hints

● The following hints are for Infocom's RPG *Battletech*. The success of this game has prompted Infocom to plan another - *Hawks on the Edge*.

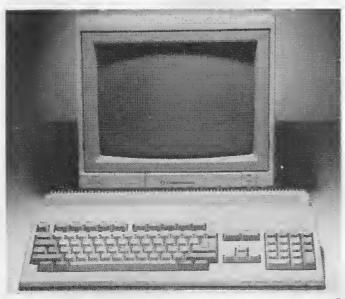Make sure you invest carefully in buying and selling shares. Remember to use the save option when gambling on risky stock, and to boost your skills to excellent before you leave the citadel. Your best choice for weapon should be the inferno, and a flak suit is enough protection. When the Kuritans attack the citadel, pick the chameleon as your battlemech. Instead of fighting, run away to the north and west and you'll find a hole in the wall and will be able to escape with the most powerful Battlemech available!!

● **Don't miss next month's Adventurers Realm!** ●

Advertisers Index